

EAST COAST RAILWAY
WALTAIR DIVISION

STATION WORKING RULES OF SIMHACHALAM NORTH STATION
(BROAD GAUGE)

No : WTF/5/SWR/SCMN-RRI

Date of Issue: _____

Date brought into force: _____

Ref Letter No. : 2000/Safety A&R/19/36 Dt:27.10.2005
of Railway Board.**NOTE:-**

The Station Working Rules must be read in conjunction with General & Subsidiary rules and Block Working Manual & Operating Manual. These rules do not in any way supersede any rules in the above books.

1. STATION WORKING RULE DIAGRAM**1.1**

- i] **Station working diagram No.SI/WRD/23090 Alt-'A'**
ii] **CSTE/E.Co.Rly/DRG No.SI- 23090 Alt-'A'**

2. DESCRIPTION OF THE STATION:

Simhachalam North [Code :SCMN] is a 'B' class junction station of the VSKP –HWH double line electrified BG section of East Coast Railway on 'B' Route. It is situated of KM. 869.602 from HWH and provided with RRI Cabin.

2.1 GENERAL (LOCATION)

i]	Name of the Station :	SIMHACHALAM NORTH
ii]	Class of Station :	'B'
iii]	Section:	HOWRAH-CHENNAI
iv]	Double / Single line	Double line [Multiple line between KTV-SCMN]
v]	Electrified /Non-electrified	Electrified
vi]	Gauge BG/MG/NG	BG
vii]	Railway	East Coast Railway
viii]	Route	'B'.
ix]	Situated at KM	869.602 KM
x]	From	HOWRAH
xi]	No. of Cabins	NIL.

2.2 BLOCK STATIONS, IBH, IBS ON EITHER SIDE AND THEIR DISTANCE AND OUTLYING SIDINGS:

a]	Adjacent Block Station	Distance	Direction
	PENDURTI	7.755 km	HWH END
	GOPALAPATNAM	2.221 km	VSKP END
i]	'A' Cabin on E.Co.Rly reception line of WMY	3.5 km	WAT MYD END
ii]	ELS Block hut of WMY on E.Co. Despatch line & KK single line.	4.26 km	WAT MYD END
iii]	Gopalapatnam on by pass single line .	2.221 km	GPT END
iv]	Jaggayyapalem Jn Cabin	5.611 km	VSKP STEEL PLANT END
b]	Provision of IBS: Nil		
c]	Automatic Signals: Nil		
d]	D K Stations / Outlying : Nil		

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2.3 BLOCK SECTION LIMITS ON EITHER SIDE OF THE STATION ON DIFFERENT DIRECTIONS :

Between Stations	The Point from which the "Block Section" Commences	The Point at which "Block Section" Ends
SCMN-PDT Double line Dn line	The advance block section commences at Down last stop signal No 204 at North end.	And terminates at BSLB of PDT south end on down line.
Up Line	The rear block section commences at Up last stop signal No 33 of PDT South end.	And terminates at SCMN Up facing point No. 101B on Up line at PDT end.
SCMN-PDT Single Line	i) The rear block section commences at Up last stop signal No. 206 of SCMN in Up direction.	And terminates at Down last stop signal No. 35 of PDT.
SCMN-PDT [Middle line]	The block section commences from Dn last stop signal 20 of SCMN.	Terminates at Up last signal of PDT.
SCMN-GPT on Double line Up line	i)The advance block section commences at Up last stop signal No. 63 of SCMN.	And terminates at BSLB on Up line at GPT North end.
Dn Line	ii) The rear block section commences at Down last stop signal No. 2 of GPT.	And terminates at down line facing point No. 151 B of SCMN.
SCMN-A/Cabin of WMY – Reception yard (Unidirectional Up line)	The advance block section commences at Up last stop signal No.61 of SCMN.	And terminates at Dn facing point No. 14 of RYD A/Cabin.
SCMN-ELS block hut of WMY (Unidirectional Down line)	The rear block section commences at Down last stop signal No. 6 of ELS block hut.	And terminates at BSLB on Down E.Co.Rly dispatch line.
SCMN-ELS block hut of WMY on KK single line.	ii The Block section commences Dn last stop signal No. 69 of KK single line of SCMN.	And terminates at Up last stop signal No. 8 of ELS block hut on KK single line.
SCMN-GPT By pass double line (UP Line)	i) The Advance Block section commence at the Last stop signal No. 71 on by pass UP line of SCMN.	And terminates at first facing point of GPT on By pass UP line.
SCMN-GPT By pass double line (DN Line)	ii) The rear block section commences at Down last stop signal of By pass line of GPT.	And terminates at BSLB on DN By pass line.
SCMN-JGPM Twin Single Line (Line No. 1)	i) The block section commences at Last stop signal No. 73 on VSP line No.1 of SCMN.	And terminates at Down last stop signal No. 40 of JGPM.
SCMN-JGPM Twin Single Line (Line No.2)	i) The rear block section commences at Last stop signal No. 75 on VSP line No.2 of SCMN end.	And terminates at Down last stop signal No. 42 of JGPM.

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2.4 GRADIENTS:

	Line	From	To	Inter Distance	Gradient
SCMN-PDT	UP MAIN LINE & Middle line	000.000 M 570.000 M 915.000 M 1464.000 M 4092.000 M 7502.000 M 7858.000 M	1464.000 915.000 M 1464.000 M 4092.000 M 7502.000 M 7858.000 M In to section	570.000 M 345.000 M 549.000 M 2628.000 M 1410.000 M 356.000 M ----	1 in 2635 falling 1 in 1250 Raising 1 in 30 Raising. .Level 1 in 500 Falling. 1 in 500 Falling. Level.
"	DOWN MAIN LINE	000.000 M 507.500 M 915.000 M 1464.000 M 2291.000 M 3791.000 M 4690.000 M	507.500 M 915.000 M 1464.000 M 2291.000 M 3791.000 M 4690.000 M In to section.	507.500 M 407.500 M 549.000M 827.000 M 1500.00M 899.000 M --	1 in 2635 falling 1 in 1250 Raising 1 in 300 Raising. Level. 1 in 1370 Raising. 1 in 550 Raising.
"	KK LINE	000.000 M 490.000 M 1391.000 M 2267.000 M 3791.000 M 4690.000 M	490.000 M 1391.000 M 2291.000 M 3791.000 M 4690.000 M Into Section	490.000 M 901.000 M 900.000 M 1500.000 M 899.000 M ---	Level 1 in 540 Raising Level 1 in 1370 Raising 1 in 860 Falling. 1 in 550 Raising.
"	VSP LINE	000.000 M 660.000 M	660.000 M 940.000 M	660.000 M 280.000 M	Level 1 in 700 Raising
SCMN- GPT 'A' CABIN & JGPM					
	UP LINE 'A' CABIN	000.000 M 213.360 M 995.000 M	213.360 M 995.000 M Into Section	213.360 M 781.640 M ---	1 in 2635 Falling 1 in 450 Raising 1 in 150 Raising
"	UP AND DOWN MAIN LINE	000.000 M 213.360 M 929.640 M	213.360 M 929.640 M Into Section.	21 3.360 M 71 6.280 M ----	In 2635 Raising. 1 in 450 Raising. 1 in 150 Raising.
	KK LINE ELS BLOCK HUT	000.000 M 213.360 M 896.430 M	213.360 M 896.430 M Into Section.	21 3.360 M 683.070 M ---	1 in 3635 Raising. 1 in 450 Raising. 1 in 350 Raising.
	ON MAIN LINE ELS BLOCK HUT (WAT - MYD)	000.000 M 213.360 M 929.640 M	213.360 M 929.640 M Info Section.	21 3.360 M 71 6.280 M ---	1 In 2635 Raising. 1 In 450 Raising. 1 In 150 Raising.
	VSP LINE	000.000 M 27.500 M 1230.000 M	27.500 M 1 230.000 M Into Section.	22.500M 1202.500M ---	Level. 1 In 450 Raising. Level.
	BYE- PASS UP LINE	000.000 M 1109.000 M 2120.000M	1109.000 M 2120.000 M. Into Section	1109.000M 1011.000M ----	1 In 450 Raising. 1 In 150 Falling. 1 in 260 Falling
	BYE- PASS DN LINE	000.000 M 1058.000 M 2700.000M	1058.000 M 2700.000 M. Into Section	1058.000M 1632.000M ----	1 In 450 Raising. 1 In 150 Falling. Level

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2.5 LAYOUT:**2.5.1 Number of Running Lines : 12(Twelve) :-**

S.No	Running Lines	Name of the Line	CSR	Whether Electrified/Non-Electrified
i.)	Line No.1	Up IInd Loop line	676 M (STR TO SS)	Electrified
ii.)	Line No.2	Up 1 st Loop line	676 M (STR TO SS)	-do-
iii.)	Line No.3	Up Main Line	790 M (STR TO SS)	-do-
iv.)	Line No.4	Down Main Line	674 M(STR TO SS)	-do-
v.)	Line No.5	Down Loop	754 M (STR TO SS)	-do-
vi.)	Line No.6	KK Line Loop – 1	674 M (STR TO STR)	-do-
vii.)	Line No.7	KK Main Line	691 M (STR TO STR)	-do-
viii.)	Line No.8	KK Line Loop-2	679 M (STR TO STR)	-do-
ix	Line No.10	VSP loop	789 M (STR TO STR)	-do-
x)	Line No.11	VSP line	803 M (STR TO STR)	-do-
xi)	Line No.12	VSP line	721 M (STR TO STR)	-do-
xii]	Line No.13	VSP loop	709 M (STR TO STR)	-do-

2.5.2 NON RUNNING LINES AND THEIR CAPACITY IN CSR**(A)**

S.No	Name of the Siding	Length In Mtrs	Whether Electrified / Non-Electrified
1	Line No of 9 Goods stabling line	520 M	Electrified
2	Hot Axle siding connected line 9	60 M	Non -Electrified
3	Hot Axle siding connected to line 1 at GPT end.	60 M	Non -Electrified
4	Substation siding taking off from up Hot axle siding on Line-1	50 M	Non -Electrified
5	Tower wagon siding at ELS end	90 M	Non -Electrified
6	SCM goods siding takes OFF at ELS end with 2 spurs.	905.6 M Main Spur 91.6 M loop spur.	Non -Electrified
7	ACC siding takes off at PDT end from Up line with a shunting neck.	Each spur length 2250 feet.	Non -Electrified

PLATFORMS :

- i.) A Rail level island passenger platform of 350.5MX10.67M is provided between Line N0.2&3.
- ii.) A medium level passenger platform of 256MX10.67M is provided between Line No.4 & 5.
- iii.) A Rail level platform of 243.1mX10.57m is provided between Line No. 8 & Goods stabling line.

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[C]. DESCRIPTION OF SIDINGS :**i]. SCMN Goods Siding:**

A Goods Stabling siding full loop length takes off from Route No.8 with both end entries. It is isolated by means of derailing switches at either end. The entrance points and the corresponding derailing switches are coupled by Roding and are operated locally by an Arc lever. Hand plunger locks fitted at the entrance points are unlocked by the key extracted from RKT controlled by PB 128 [on VSKP end) and 117 (on PDT end) in the reversed position. When the keys are extracted from the RKT UP and Down reception and UP & Down starter signals, shunt signals will remain locked in their normal position.

- ii]. SCMN goods siding takes off from down despatch line at ELS end of the yard, and the other side terminates into a dead end. The siding is having 2 spurs 1 main spur having 905.6 M CSR and loop spur with 275 M DS to DE. The siding is isolated by crossover no 149 A&B. The Up & Down movements are authorised by shunt signal provided at the site. When it is intended to place or draw wagons in / out to/from siding the station master on duty at the RRI cabin shall ensure that down despatch line No 5 is clear of all obstruction. No line clear has been granted to ELS block hut on the unidirectional down despatch line and the reception signals to line No 5 are kept at on. If placement is to be done from KK grid line 6 to 8 he shall also ensure that no line clear has been granted to ELS on KK single line train The shunting authority shall be issued in prescribe form to Loco pilot & Guard through a competent Railway servant by Station Master on duty. He shall also take off the shunt signal where provided When the pilot return after the work is completed in the siding he shall ensure that no line clear is granted on down despatch line and / or KK line for a train, After setting the correct route for admission the shunt signal will be taken off for shunting train in to the yard. The complete arrival of the train with last vehicle from the siding and the train standing clear of fouling mark with adjacent lines the guard will ensure and in form the complete arrival to the station master at RRI over VHF set. If it is not available or not in working condition the guard shall inform SM/ RRI in person.

The guard and TP/TPM who ever placed the wagons in SCMN siding shall secure the wagons as per rules and confirm this on the back of the shunting order memo in writing while returning the copy to the cabin SS/SM.

iii.) HOT AXLE SIDING :

A Hot Axle Siding takes off from goods stabling siding having both sides entry. It is isolated by means of D/S at either end. The entrance points of DS are hand operated by the Arc levers provided at site. The points are locked by means of clamping and padlock during shunting operations.

iv]. HOT AXLE CUM SUB-STATION SIDING :

A Hot Axle cum sub-station siding takes off from Line No.I at VSKP end of the yard with one side entry. It is isolated by means of derailing switch. The entrance points and derailing switch isolating the siding from the running line are coupled by rodding and are operated by a local arc lever released by the control key NO 131 extracted from RKT in its reversed position. When the key is taken out from the RKT UP reception signal of Line No.I and UP starters No.25 [A.B] of LineNo.I will remain locked in their normal position. A sub-station siding is an extension to Hot Axle Siding which is isolated by means of derailing switch at VSKP end and terminates into dead end at Howrah end of the yard. The derailing switch point is hand operated by the ground lever provided at site.

v]. TOWER WAGON SIDING:

The Tower Wagon Siding takes off from KK Line inside the UP Home Signal at VSKP end of the yard. It is isolated by means of derailing switch. The entrance points and the derailing switch are operated by Point No.,150. The siding, terminates into a dead end inside the tower wagon shed. The movements "from" and "to" tower wagon siding and the KK line grid are authorised by shunt signals.

vi]. ANCC SIDING:

Takes 'OFF' from Up line at PDT end. Details given at Appendix- H.

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2.5.3 ANY SPECIAL FEATURES IN THE LAYOUT:

(a)

- i]. Paging and Talk back points are provided at 16 location at north end and south end of SCMN north yard to give working instructions to yard staff by SS/SM of RRI –SCMN.
- ii]. Diamond cross over provided at south end of SCMN yard between Up and Down Main line.
- iii]. Double slip points are provided on KK line and E.Co.Railway goods despatch line towards south end of yard.

2.6 LEVEL CROSSINGS:

- i) One 'B' Class interlocked manned level crossing gate is situated at KM 870/9-10 across Steel Plant line (SCMN-Vadlapudi) and Bye-pass line(SCMN-GPT RRI Cabin), short of UP Advanced Starters of respective lines. Telephone communication provided with SS/RRI Cabin
- ii) One 'B' Class interlocked manned level crossing gate is situated at KM 870/13-14 across KK Line and S.E. Railway Despatch line between SCMN-ELS Block Hut, short of main home signals of respective routes. Telephone communication provided with SS/RRI cabin.
- iii) One 'B' Class Mid section interlocked level crossing gate is situated at KM 864/17 across Dn line, Up line, Middle line and KK Line between SCMN-PDT with Magneto phone to SCMN RRI Cabin

Details of LC gates are given in Appendix 'A' of this station Working Rules.

3.0 SYSTEM AND MEANS OF WORKING:-**[a].DOUBLE LINE:**

Trains are worked under "Absolute Block System" in accordance with provision of GR 8.01 (1) (a) and (b) 8.01 (2) (b), 8.03 (1) la)[b](c) (ii) Chapter-XIV RuleNo.14.01 to 14.13 and Block Working Manual Chapter-V.

On the double line section SCMN-PDT ,SCMN-GPT,SCMN-GPT (By Pass double line), SCMN-" A" Cabin & E.Co. reception (Unidirectional) and SCMN-ELS Block Hut on E.Co.Rly Despatch (uni-direction) trains are worked on Absolute Block System by means of "SGE" type Lock & Block instruments in accordance with Chapter VIII and XIV of the General and Subsidiary rules and Chapter V of BWM. The Lock and Block instruments are installed in the RRI Cabin and are operated by the Line Clear Station Master who is responsible for the custody of its keys

[b].BLOCK INSTRUMENTS:

- i] S.G.E Type (Non Co-operative) double line lock and block instruments are provided in the Route Relay Cabin vide BWM 5.01 (a). The Lock and Block instruments are operated by Station Master on duty.
- ii]. Taking "OFF" of the Last Stop Signal is the authority for the loco pilot to take his train into the concerned block section vide GR 14.08(a).
- iii]. The Block instruments are provided with locking arrangement. The key of the block instruments must be in the personal custody of Station Master on duty.
- iv]. The double line Block instruments are equipped with attached telephone communication connected to adjacent block cabin/ station of the section concerned

[c].SINGLE LINE :

- [i] Trains are worked under "Absolute Block System" in accordance with the provisions of GR 8.01 (I)(a)&(c),8.01(2)(b),8.03(2)(a)(b)(c)(ii), 14.01 to 14.11 and 14.13 (except 14.09) and Block working manual Chapter-IV Part-II in either direction.

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- [ii] Handle type Token-less Block Instruments of co-operative type are provided for working trains of following sections in terms of BWM 4.01 (b) and GR 14.01 (a) which shall be operated by the RRI Station Master on duty as per the provisions of GR Chapter-XIV of G & SR and Block Working Manual Chapter-IV Part-II.
- | | | |
|-------------|---|---------------------------------|
| KK Line | : | SCMN-PDT, & SCMN-ELS Block Hut. |
| Middle line | : | SCMN-PDT |
| VSP Line | : | VSP Line. 1 (SCMN-JGPM) |
| | | VSP Line.2 (SCMN-JGPM) |
- [iii]. Taking " OFF" of the last stop signal is the authority for the loco pilot to proceed into the concerned Block Section vide GR14.08(b)(iv) and BWM 4.02(1)(d)
- [iv] . SM's lock Up key, is provided for the instrument for locking the same to prevent unauthorized operation vide BWM 4.31. The key of the block instrument must be in the personal custody of RRI SM on duty
- [v]. The single line token less block instruments are provided with attached telephone communication with the adjacent station/ cabin of the concerned section

4.0 **SYSTEM OF SIGNALLING AND INTERLOCKING:**

- [a] The station is provided with standard III Route Relay inter locked station with Manually operated Multi-Aspect Colour light signaling in accordance with General Rules No. 3.07 [4], [5], [6], & [7], 3.08 [4][b] & [c], 3.09, 3.10, 3.17, 3.19, 3.20, 3.24 [4], 327 [a], 3.32 [1] & [2] to govern the movement of trains into and out of the yard. All the points & signal are power operated from RRI panel.
- [b] "Calling on" signals In accordance with General Rule No. 3.13 [1] [b], 3.13 [2], [3], [4], [6][b] are provided below the stop signal for receiving/Despatching a train past stop signals in the "ON" position
- [c] Shunt signals are also provided for controlling shunting movement in Simhachalam North yard in accordance with GR 3.14

4.1 **ROUTE RELAY INTERLOCKING PANEL BOARD:**

A central RRI panel cabin is provided. Two panels, i.e one operating panel and the other indication panel are install in the cabin opposite the yard so that when SM on duty face the panel the yard lay out on the panel corresponds with the actual field lay out in either direction.

The operating panel depicts the yard lay out and consists of push buttons for operating the power operated points and signals and release of interlocked gate keys, siding keys, and that of crank handle keys etc.

The indication panel reflects the indication of operating panel indications of all signals points etc but no operation of signal or points can be made from this panel.

All signals and points in the yard are power operated from panel

.The operating panel shall show no light over the route in normal position (i.e when route is not initiated). But when the route is initiated and signals are taken 'OFF' a white strip lights illuminates on the initiated route from facing end to the trailing end including the over lap length. But when a line is occupied or when track circuit is failed a RED strip light glow over the failed/ occupied track circuit zone continuously

- [a]. "**Calling on**" signals In accordance with General Rule No. 3.13 [1] [b], 3.13 [2], [3], [4], [6][b] are provided below the stop signal for receiving/Despatching a train past stop signals in the "ON" position.
- [b]. **Shunt signals** are also provided for controlling shunting movement in Simhachalam North yard in accordance with GR 3.14.

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[c]. CRANK HANDLE

When any point fails to operate normally by the Route Setting operation through Panel it is inevitable to operate the points with crank handle. The SS/SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle for motor operated points shall be followed as per operating manual para-20.06.

CRANK HANDLE**CONTROL POINTS**

CH-1	----	161
CH-2	----	160,162
CH-3	----	158,159,
CH-4	----	147,148,150
CH-5	----	153
CH-6	----	151,152
CH-7	----	149
CH-8	----	138,139,140
CH-9	----	143,145,146
CH-10	----	132,133
CH-11	----	144
CH12	----	SPARE
CH 13	----	130
CH14	----	129
CH15	----	123
CH16	----	121,122,125
CH17	----	110,111,112,113
CH18	----	114
CH19	----	115,116
CH20	----	109
CH21	----	127
CH22	----	107
CH23	----	105,106
CH24	----	103
CH25	----	102
CH26	----	101

These crank handles keys are interlocked with the signaling and interlocking system at this station and normally locked inside the RKT instrument at the respective Crank Handle's Locations/goomties. Crank handle keys can be taken out only when all signals are not taken 'OFF' and the route is not locked for whatever reasons. Crank Handle key can be released by pressing common 'TRANS' push button and concerned Crank handle control push button simultaneously. When the keys are taken out no signal can be taken 'OFF' over the particular route on the points nominated by the crank handle. This key can be electrically transmitted at both ends locations of the yard for manual operation of the defective points.

The crank handles are kept inside a box in lock condition in the custody of SS/SM. When ever it is required to operate point manually by crank handle, the crank handle is to be handed over to concerned staff by SS/SM with crank handle and in conjunction with crank handle key the point motor is to be operated.

The failure of motor operated points must be ensured by physical checking that there is no obstruction. SS/SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SS/SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting, clamping and padlocking of the points devolve on the SS/SM on duty. (Details of use of Crank Handle as per Appendix-'B').

The cases of failure of motor point, it should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

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[d]. TAKING OFF CALLING-ON SIGNAL:

Miniature color light Calling-on signal is provided below the Home signals and below starter and intermediate starter signal in terms of GR.3.13(6)(b). A Calling-on signal shows no light in the 'ON' position and White light when taken "OFF". A calling-on signal, will be taken 'OFF' for reception of a train when the Home signal above it cannot be taken 'OFF' due to failure or any other reason or for admission of train on blocked line. Before taking 'OFF' Calling on signal during failure of track circuit the route and clearance of the track over which the train will be admitted must be checked physically by SS/SM on duty

To take "OFF" Calling-on signal the train must come to a stop at the foot of the Home signal, occupying the track circuit in rear of the signal. When a train occupies the track circuit a RED light strip will appear on the Panel. The particular route on which train is intended to be received shall be set by operating the point push button and group button individually or by signal and route buttons pressing or by crank handling in the event of failure of operation of points through panel. After the route is set, the Calling On signal button (Red with White dot) shall be pressed (as the case may be) simultaneously along with the concerned route button for 2 to 3 seconds and then released. After a lapse of 120 seconds, the Calling-on signal clears i.e a Yellow light glows at the concerned Calling-on signal on the panel. Each such operation shall be recorded by the SS/SM on duty along with the reasons to do so. The calling-on signal route can be released after complete arrival of the train or by emergency cancellation.

[e]. IBS SIGNALS :- Nil**[f]. SHUNT SIGNALS**

Independent shunt signals SH 5 (A-C), SH 213(A-C) SH7[A-C], SH19, are provided towards North end and SH70, SH64, SH90, SH88, SH98, SH96 are provided towards South end for yard.

Dependent shunt signals(i.e shunt signal below main signal) SH16, SH 214, SH 9, SH12, SH17, SH15, SH36, SH21, SH34, SH32, SH30, SH28, SH38, SH40, SH42, SH44 are provided towards north end and SH41, SH39, SH37, SH52, SH43, SH27, SH25, SH29, SH49, SH51, SH47, SH45, SH72, SH53, SH68, SH92 are provided towards South end of the yard.

[g]. EMERGENCY CROSS OVER

Emergency crossover No.151 towards VSKP end is provided.

[h]. L.C. GATE OPERATION

Details described in Appendix-'A'.

[i]. EMERGENCY POINT OPERATION (BLACK WITH RED DOT):

Emergency point operation facility is provided to operate the point from the panel in case of failure of point controlling track circuit. A push button (Black with Red dot) for emergency point operation is provided on the top of the Panel. If such operation is necessary, the SS/ SM on duty, after ensuring that SS/SM's point Key is 'IN' and no vehicle is standing on the concerned point zone shall press the emergency point operation button along with relevant point button simultaneously. Then keeping point button pressed, emergency point button to be released and the point group normal button or point group reverse button is to be pressed for operating the point to 'NORMAL or REVERSE.. Every emergency point operation shall be recorded in the station diary and in the register meant for this purpose.

[j]. EMERGENCY ROUTE RELEASE COUNTER:

This counter is provided to register the number of operations made for emergency cancellation of route. The SS/SM must record the last number registered on the counter while taking over/handing over duty.

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[k] EMERGENCY ROUTE RELEASE INDICATION (WHITE) EMERGENCY ROUTE RELEASE BUTTON (WHITE WITH RED DOT):

The RRI is based on the principle of 'DEAD APPROACH LOCKING'. As such when a route is set and signal is taken 'OFF' on the route, the route gets locked. Normally the route is released by the passage of the train over the route.

When it becomes necessary to alter the route after the signal has been taken 'OFF' vide SR 3.36.02(a), the concerned signal must be put back to Danger by simultaneously pressing the signal cancellation button and concerned signal button.. After this first the emergency route release button (White with Red Dot) positioned on the top of the panel to be pressed after breaking seal and subsequently the concerned signal button is to be pressed releasing the emergency route release button. A white light will be lit indicating that the timer is working.

After a lapse of 120 seconds the white light along with the white strip of light will disappear suggesting that the route has been released. In case the route illumination (Yellow strip lights) does not disappear, it suggests that the route is not released/cancelled. In such case the concerned S&T staff should be advised immediately to release by rectifying the fault. It is to be ensured that after every emergency route release operation S&T staff shall seal the emergency route release button.

Each operation of emergency cancellation of route should be recorded in the emergency route release counter register by registering the next higher number. All such operations and the new number should be recorded in the station diary Veeder counter register and in the train signal register.

[l] TRACK CIRCUITS:

Line No.1,2,3,4,5,6,7,8,10,11,12 and 13 are track circuited. In addition there are short length track circuits in advance of Advanced Starter Signals and Home signal in all the directions are also provided. For Calling-on signals (7 Rail length) track circuits are also provided in rear of the Home signals in all directions. From last trailing point/fouling mark in either side of Yard to Advanced Starter Signals are also track circuited. Indications for the above track circuits are available on Indication Panel at SS/SM's office. Normally the panel is blank except point and Block section indications for the above track circuits/ Axle counters are available on Panel at SS/SM's office. When a signal is cleared the route indication ' Yellow ' appears for the particular route set and 'Red' light appears as the train occupies the track circuit.

[m] AXLE COUNTER:

- [i] Simhachalam North - Pendurti [KK Line, Middle Line & Dn line].
- [ii] Pendurti-Simhachalam North [UP Line, Middle line. & KK Line
- [iii] Simhachalam North- ELS Block Hut [S.E.Rly Goods Despatch].
- [iv] Simhachalam North – ELS Block Hut [KK Line Single line].
- [v] Simhachalam North – Jaggayyapalam [VSP Line No. 1 Single Line].
- [vi] Simhachalam North - Jaggayyapalam [VSP Line No.2 Single Line].

. **FOR SEC: SCMN-PDT:-** 4 pairs of Digital axle counter are provided between SCMN-PDT on Up line, Dn line, Middle line and KK line.

FOR SEC: SCMN-JGPM: 2 pair of digital axle counters are provided on VSP line No.1 and VSP line No.2.

The position of the Block section whether cleared or occupied are reflected in the Panel/VDU provided in the Station Master's office which shows 'GREEN' when the Block Section is clear and 'RED' when occupied. Whenever a train enters in to the Block Section, "Block Section Clear" indication 'GREEN' for the particular block section disappears and 'RED' indication appears.

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After complete arrival of the train the 'RED' indication will disappear and 'GREEN' indication will appear. If after the complete arrival of the train the 'RED' indication does not change to 'GREEN' it should be assumed as Block Instrument failure for the particular section and necessary action as per GR.14.13 is to be followed. The axle counters are interlocked with the respective block instruments for that section. If axle counter fails, Advanced Starter signal shall not come to OFF and the concerned instrument shall remain locked in last operated position.

A resetting arrangement for resumption of the system in case of failure of axle counter has been provided in the SM office of the adjacent Block stations after being assured by both the SM that the last vehicle has arrived complete at the receiving station by exchanging Private Number then resetting to be complied with. (Details of resetting procedure given in APPENDIX-'B' of this SWR).

NOTE:

Before taking off reception and dispatch signals for Up and Down directions the SS/SM on duty should ensure that the entire route including overlap and berthing portion is clear of all obstructions by observing the Track indication/Axle counter indication. The indication of track will exhibit Red Light when track is occupied and White light when track is clear. There will be no track indication when any route is not set.

[n]. **INTERMEDIATE BLOCK STOP SIGNALS:** - Nil.

4.2 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF

Double locking arrangement for Relay room is provided. Key of one lock remains with Signal maintainer of the section and the key of the other lock remains with the SM on duty. The relay room cannot be opened unless both the keys are used. In the event of necessity such as for attending failure or regular maintenance, on being requisitioned by S&T maintainer, SM shall hand over the key to maintainer. On completion of the work, the maintainer shall lock the relay room and return the key to SM. The transaction shall be recorded in relay room key register by SM on duty vide O.M 1.14 & SR 3.51.05 and shall duly signed by SS/SM and maintainer respectively.

Whenever the key is taken by the maintainer for normal maintenance of work, the S&T staff shall give a remark in the register that they will not interfere with the safe passage of train. The SM on duty shall ensure that this remark is given by the S& T staff , other wise the installation shall be treated as non-interlocked and the action taken in terms of GR 3.69, 3.70 and SRs thereto.

4.3 POWER SUPPLY

(i). Normal power supply: Local power supply from A P Trans Co.

(ii). Stand by power supply: (a). Traction power supply.
(b). D.G.Set.

(iii). Whether the change over from one source
of supply to the other is automatic or manual : Automatic.

Whenever the local power supply fails, the system in change over switch will automatically switched over to Traction power supply,. When both have failed SM on duty immediately advice his staff to start the generator and SS/SM on duty shall operate the switch to generator supply which resumes supply to signals and RRI. When local / OHE supply is restored the system automatically switch over to the local / OHE supply. Indication of supply is provided on the operating panel as M-1 for local, M-2 of OHE & M-3 for generator supply respectively.

5.0 TELECOMMUNICATIONS :

The following telecommunication facilities provided at the RRI cabin to deal with the train movement..

[a] The Block telephone attached to block instruments of double line SGE type lock & block instruments and handle type single line token less block instruments connecting adjacent block

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- cabin/stations, of the respective sections.
- [b] Magneto phone connecting the block cabins /stations.
 - [c] Section control phone of the section VSKP – DVD – KTV VSKP complex board
 - [d] Section Control phone of section OEC-KRPU for the single line section
 - [e] Magneto phone connecting level crossing gates connected to RRI cabin viz 870/9-10, 870/13-14 & 864/17 individually.
 - [f] Traction power control of section VSKP-PSA. Section including VSKP complex board stations
 - [g] Traction power control of section OEC- KORPUT section
 - [h] Section control of S.C.Rly VSKP-RJY.
 - [i] Auto telephone connecting Divisional HQ & stations between VSKP – DVD – PSA including yard cabins.
 - [j] VHF set connecting adjacent block cabins / stations.
 - [k] Announcement speaker to talk to yard staff to talk to RRI-SS/SM and get instructions
 - [l] BSNL DOT auto telephone for SS/SM.
 - [m] Magneto phone connecting goods clerk ANCC siding and clerk incharge of SCM station
 - [n] Auto phone to running room.
 - [o] Desk type magneto phone to TNC.
 - [p] Desk type magneto telephone to Seven (7) crank handle goomties.

6.0 **SYSTEM OF TRAIN WORKING:**

The movement of trains is controlled by section controller on duty whose orders shall be complied with provided they do not contravene any provisions of General Rules, Subsidiary Rules, Station Working Rules, Block working manual and any other safe working instructions issued from time to time.

In the event of suspension of control working the SS/SM on duty shall work independently in conjunction with the SS/SM of adjoining Block Stations and shall be responsible to ensure that there is no undue delay to train operation in general.

6.1 **DUTIES OF TRAIN WORKING STAFF IN EACH SHIFT:**

The following is the complement of operating staff provided at the station in each shift for train passing duty.

6.1.1 **TRAIN WORKING STAFF IN EACH SHIFT :**

COMPLEMENT OF STAFF :

S.M.R(Station Manager)	1
Station Superintendent	10
Dy.S.S	3
CMR	2
AYM	2
TPM-A	2
Porter	9
Sr.TNC	3
Jr.TNC	1
Safaiwala-Cum-Lamp Man	1

STAFF IN EACH SHIFT :

Station Superintendent	2
Sr, TGK	1
TPM – 'A'/TPM-'B'	3
Sr. TNC	1
Jr. TNC	
Safaiwala-Cum-Lamp-Man	1

The above staff shall work as per roster issued from time to time by Divisional Railway Manager (P) and these rosters shall be conspicuously displayed in the Station Supdt's office and in Gate lodge for traffic gate man (details duties are given in APPENDIX-'D').

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6.1.2 RESPONSIBILITY FOR ASCERTAINING CLEARANCE OF LINES AND ZONES OF RESPONSIBILITY.

The SS/SM on duty is responsible to ascertain the clearance of the nominated line between first facing point and advanced starter signal in each direction.

USE OF PRIVATE NUMBER BOOKS AND IDENTIFICATION NUMBER SHEETS:

Sufficient private number books and identification number sheets in sealed covers shall always be kept in stock by SMR under lock key by maintaining register for this purpose.

6.1.3 ASSURANCE OF THE STAFF IN THE ASSURANCE REGISTER :

Any staff before taking of independent charge of duties connected to train working or any staff who is away from his duty for the period of 15 days or more shall sign in the assurance register as token of having understood the contents. However in the event of any corrections or modification in the SWR is involved the assurance of all staff who ever is entrusted the work of train passing duty shall be obtained a fresh in the assurance register by the in charge of the station before they are allowed to work vide SR-5.01.02.

6.2 CONDITIONS FOR GRANTING LINE CLEAR:

Before granting line clear for a train the SM on duty shall ensure that:

- (i) The whole of the last preceding train has arrived completely.
- (ii) All necessary signals have been put back to 'ON' behind the said train.
- (iii) All signal lights pertaining to the train are burning properly.
[Ref GR.8.01 (1) (a) (b) and 8.01(2) (b) and 8.03 (1) (a) (b) & c (ii) SR 3.42.05 & SR 3.68.05]
- (iv) Adequate distance to be kept clear for granting LINE CLEAR.

LINE NO.	CLEARANCE OF ADEQUATE DISTANCE			
	FOR UP TRAINS		FOR DOWN TRAINS	
	FROM	TO	FROM	TO
Line No.1 (UP 2nd Loop)	STR SIG No. 25 A/B	F.M OF PT.No.133B WHEN POINT No.133 OR ADV.STR SIG No 63 WHEN POINT No.63. when point No. 133 is REVERVED		
Line No.2. (UP 1 ST LOOP)	STR SIG No.27 A/B	FM OF PT No.133B OR ADV STR SIG No.63 WHEN PT No.133 IS REVERSED.		
Line No. 3 [UP MAIN LINE]	STR SIG No. 29 A/B.	ADV STR SIG No.61 OR ADV STR SIG No.63.		
Line No.4. [DN. MAIN LINE]			STR SIG No.28	INTER STR SIG No.12
Line No. 5			STR SIG No.30.	THE END OF SAND HUMP OR INTER. STR SIG No.12
Line No. 6 [GOODS]	TRAILING POINT	INTER STR SIGNAL No <u>214</u>	DN STR SIGN No.37	UP TO END OF 139AT

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	NO.115B. TRAILING POINT No.109B	[OR] INT STR SIG No.12		VSKP END WHEN PT.No.139 NORMAL [OR] END OF SAND HUMP.
Line No.7 [KK line].	Trailing point No. 115B	INTER STR SIG No.214 [OR] INT STR SIG No.12	Trailing point No. 130 B	UP TO END OF 139AT VSKP END WHEN PT.No.139 NORMAL.
Line No.8 [KK LOOP]	Trailing point No. 115B STR SIG No.36	INTER STR SIG No.214 [OR] INT STR SIG No.12 TO END OF SAND HUMP	STR SIG No. 41	UP TO END OF 139AT VSKP END WHEN PT No.139 NORMAL OR TO THE DEAD END OF ORL.
KK Loop (line No.8)	Trailing point No.115B STR SIG No.36	INT STR SIG No.214 OR INT STR SIG No.12 TO END OF SAND HUMP	STR SIG No.41	UPTO END OF 139AT VSKP END WHEN PT No.139 NORMAL OR TO THE DEAD END OF ORL
VSP (Line No. 10)	STR SIG No. 45	UPTO DS No.143	STR SIG No.38	THE END OF ORL OR ADV STR SIG No.206 OR INT. STR. SIG No.16
VSP Line (Line No. 11)	STR SIG No.47	END OF 146AT AT VSP END	STR SIG No.40	ADV.STR.SIG. NO.206 OR INT.STR.SIG NO.16.
VSP Line (Line No. 12)	STR SIG No.49	END OF 145AT AT VSP END	STR SIG No.42	ADV.STR.SIG. NO.206 OR INT.STR.SIG NO.16.
VSP LOOP (Line No. 13]	STR SIG No.51	THE END OF ORL OR UP TO END OF 145AT VSP END	STR SIG No.44	THE END OF ORL OR ADV.STR.SIG. No.206 OR INT.STR.SIG. No.16

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6.2.1 ANY SPECIAL CONDITIONS TO BE OBSERVED WHILE RECEIVING OR DESPATCHING A TRAIN:-**6.2.1.1 SETTING OF POINTS AGAINST BLOCKED LINE**

When a running line is blocked by stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after the arrival of a train of the station etc., the points in rear on double line sections and at either end in single line sections should be immediately set against the blocked line except when shunting or any other movement is required to be done on that line.[Refer GR3.51.06(a)].

If all the lines at a station happen to be blocked, when line clear has been granted to a train, the point should be set for the line occupied by a stabled load or a Goods train. So that, in case of mishap the chances of casualties re minimized. In case of all the trains occupied by passenger trains, points should be set for a loop line to negotiate which the speed of in coming train would minimize the consequences /casualties.

The above precautions shall be taken in addition to the observance of other precautions. [Refer SR 5.04.01 & SR 5.23.01].

6.2.1.2 RECEPTION OF A TRAIN ON BLOCKED LINE

In case of reception of a train on obstructed line the SM shall send the written permission in the for T/509 referred in 5.09.01[a] and shall enclose the reason for such admission, the line number and the nature of obstruction on that in setting and locking of points shall be done as per SR 3.69.03. A stop hand signal shall be exhibited by SM personally at a distance of not less than 45 M from the point of obstruction to indicate the loco pilot as to when the train shall be brought to a stand.

However the SM, whenever possible , shall intimate the loco pilot through the SM of station in rear and also by taking off calling ON signal.[Refer 5.09[1] & [2].

6.2.1.3 RECEPTION OF TRAIN ON NON-SIGNALLED LINE

Nil

6.2.1.4 DESPATCH OF TRAIN FROM NON-SIGNALLED LINE.

Nil

6.2.1.5 DESPATCH OF TRAIN FROM LINE PROVIDED WITH COMMON STARTER SIGNAL.

NIL.

6.2.1.6 SPECIAL CONDITIONS :

a) **SPECIAL INSTRUCTIONS :** -NIL-

b) **SPECIAL RESTRICTIONS :**

- i) While performing shunting engine must be leading towards falling gradient.
- ii) When ever the train whose sanctioned speed is above 100KMPH is required to stop out of course of the station, first it shall be brought to a stand of Home Signal and shall then be admitted on signals. The SS/SM shall come out of station building and show danger signals to the Loco Pilot. Vide RB's Lr.No.2/SFY/(A&B)/29/8 Dt: 24.12.92 &
- iii) Divl.SC.No.9/90 Dt:27.05.99.
- iv) Through passage of passenger train is prohibited on line No.5 due to 1 in 8 ½ turn out.

6.3 CONDITIONS FOR TAKING "OFF" APPROACH SIGNALS:-

The SM on duty shall nominate a clear line not only up to the starter but also for an adequate distance beyond it for reception of trains. [Refer GR 3.36, 3.38, 3.40, 4.17 and SR 3.36. 01, 3.36.02, 3.36.04, 3.40.01, 3.40.02, 3.47.01, 4.17.02, and Block Working Manual].

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ADEQUATE DISTANCE: (SIGNAL OVERLAP)

To take off the Home signals for admission of a train, the adequate distance (overlap) as mentioned below shall be kept clear. [Refer GR.3.40 and SR thereto].

Home Signal Over Laps at SCMN for Reception of Trains

6.3.1 RESPONSIBILITY OF STATION MASTER FOR RESTORATION OF SIGNALS TO “ON”

If a signal once taken ‘OFF’ for reception/dispatch of a train, and in emergency it required to put back to ‘ON’ in case of reception signal, the route over which the train would pass shall not be altered until the train has come to stand unless the route has to be altered to avert an accident. In case of departure signal, before changing the points or allowing any other movements the “Authority to Proceed” if any, handed over to the Loco pilot must be with drawn and the Loco pilot of the train concerned shall be advised of the change in writing and his acknowledgement will be obtained in a memo. [Refer SR 3.36.02 (a) & (b)]

6.4 SIMULTANEOUS RECEPTION/DESPATCH, CROSSING AND PRECEDANCE OF TRAINS:

According to the existing interlocking at the station, the following simultaneous reception and despatch of trains is permitted.

1.	Reception of an UP train on line No.1 or 2 from KK single line from PDT end. .	And	Despatch of another UP train from line.3 or 6 or 7 or 8 to GPT. OR Despatch of another UP train from line No.6 or 7 or 8 to ‘B’ Hut.[KK] line or GPT [By pass] line or JGPM [VSP-L-1 or VSP L-2]. OR Despatch of another UP train from Line No.10 or 11 or 12 or 13 to ‘B’ Hut.[KK] line or GPT [By pass] line or JGPM [VSP L-1 or VSP-L-2]. OR Reception of a train from GPT[By pass] line or ‘B’ Hut [E.Co.Rly Goods Despatch] line or to ‘B’ Hut.[KK] line or GPT [By pass] line or JGPM [VSP L-1] or JGPM [VSP-L-2].to line No.5 or 8 setting over lap to sand hump/ over run line to line No 10 or 13. OR Reception of a train from ‘B’ Hut.[KK] line or ‘B’ Hut [E.Co.Rly goods despatch] or GPT [By pass] line or JGPM [VSP L-1] or JGPM [VSP-L-2].to line No.10 [setting over lap to over run line or INT STR SIG No.16 or Line No.11 [setting over lap to INT SIG No.16] or Line No.12 [setting over lap to INT SIG No.16] or Line No.13[setting over lap to INT SIG No.16] JGPM [VSP L-1] or JGPM [VSP-L-2]
2.	Reception of an UP train on line No.3 setting over lap to ADV STR SIG No.63 from KK single line from PDT end .	And	Despatch of another UP train from line. 1 or 2 to ‘A’ Cabin And Despatch of train from Line No.6 or 7 or .8 to ‘B’ Hut [KK line] or GPT [By pass] line or JGPM [VSP L-1] or JGPM [VSP-L-2] OR

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			<p>Reception of a train from 'B' Hut.[E.Co. Rly goods despatch] line or 'B' Hut [K.K] line or GPT [By pass] line or JGPM [VSP L-1 or VSP-L-2].to line No.10 [setting over lap to over run line or INT STR SIG No.16 or Line No.11 [setting over lap to INT SIG No.16] or Line No.12 [setting over lap to INT SIG No.16] or Line No.12 [setting over lap to INT SIG No.16] or Line No.13[setting over lap to INT SIG No.16] JGPM [VSP L-1] or JGPM [VSP-L-2]</p> <p style="text-align: center;">OR</p> <p>Reception of a DN train from GPT on DN line to line No.5 or Line No.8 (setting over lap to sand hump/over run line.)</p>
3.	Reception of train from KK single line from PDT end to line No.3 setting over lap to advanced starter Signal No.61.	And	<p>Despatch of train from Line No.6 or 7 or .8 to 'B' Hut [KK line] or GPT [By pass] line or JGPM [VSP L-1] or JGPM [VSP-L-2]</p> <p style="text-align: center;">And</p> <p>Reception of a train from 'B' Hut.[KK] line or GPT [By pass] line or JGPM [VSP L-1] or JGPM [VSP-L-2].to line No.10 [setting over lap to over run line or INT STR SIG No.16 or Line No.11 [setting over lap to INT SIG No.16] or Line No.12 [setting over lap to INT SIG No.16] or Line No.12 [setting over lap to INT SIG No.16] or Line No.13[setting over lap to INT SIG No.16] JGPM [VSP L-1] or [VSP-L-2]</p> <p style="text-align: center;">OR</p> <p>Reception of DN train from GPT DN line to Line No.5 or 8 [setting overlap to sand hump/over/over run line]</p>
4	Reception of train from KK single line from PDT end to line No.6 setting over lap to sand hump.	AND	<p>Despatch of another train from Line No.1 or 2 or 3 or 7 or 8 to GPT or 'A' Cabin on UP line.</p> <p style="text-align: center;">OR</p> <p>Despatch of trains from Line No. 10 or 11 or 12 or 13 to JGPM [VSP L-1, VSP L- 2].</p> <p style="text-align: center;">OR</p> <p>Reception of train from GPT Dn Line to Line No. 4 or 5 or 8. [For L-5 setting over lap to sand hump and for L-8 setting over lap to over run line.]</p> <p style="text-align: center;">OR</p> <p>Reception of a train from GPT Dn Line to Line No.4 and reception of another train from 'B' Hut [E.Co.Rly Goods despatch] line or 'B' Hut [KK] line or GPT [By pass]line or JGPM [VSP L-1 or L-2] to line No.5 or Line No.8.</p> <p style="text-align: center;">OR</p> <p>Reception of train from JGPM[VSP-L.1 or L</p>

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			-2] or GPT [By pass] or 'B' Hut [KK] line to Line No.10 or 11 or 12 or 13,
5	Reception of train from KK single line from PDT end to line No.7.	And	Despatch of another UP train from line No. 1 or 2 or 3 to 'A' Cabin or GPT. AND Despatch of another UP train from Line No. 10 or 11 or 12 or 13 to 'B' Hut [KK] or GPT[By pass] or JGPM[VSP Line No.1 or Line No.2] AND Reception of another DN train from GPT to Line No.4 or 5. OR Reception of another DN train from 'B' Hut[E.Co.Rly Goods Despatch] or 'B' Hut [KK] or GPT[By Pass] or JGPM [VSPLine No.1 or Line No.2] to Line No.4 or 5. AND Despatch of DN train from Line No.4 or 5 or 6 to middle line towards PDT. .OR Reception of Up train from Up line or Middle line to Line No.1 or 2 to 3.
6	Reception of train from KK single line from PDT end to line No.8 setting over lap to over run line.	And	Despatch of another UP train from Line No.1 or 2 to 'A' Cabin. AND Despatch of another train from Line No.3 or Line No.6 or Line No.7 to GPT on UP line. OR Despatch a train from L-1 or L-2 or L-3 or L-6 or L-7 to 'A' Cabin. AND Despatch of another UP train from Line No.6 or Line No.7 or Line No.10 or Line No.1 or Line No.12 or Line No.13 to 'B' Hut [KK} line or GPT[By pass] Line or JGPM[VSP L-1 or L-2] OR Reception of another DN train on line No.4 or 5 or 6 from GPT [DN Line] or 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut [KK] Line or GPT [By pass] line or JGPM[VSP L-1 or L-2]line OR Reception of another train on line No.10 or 1 or 12 or 13 from 'B' Hut[KK]Line or GPT [By pass]line or JGPM[VSP L-1 or L-2]line AND Despatch of another train from L-4 or 5 to middle line towards PDT. OR Reception of another train on Line No.1 or 2 or 3 or 6 from UP line or middle line from PDT end.
7	Reception of train from KK	And	Despatch of another train from line No.1 or

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	single line from PDT end to line No.10 setting over lap up to DS Point Nko.143..		<p>2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT. AND Despatch of another UP train from Line No.11 or 12 or 13 to 'B' Hut [KK] Line or GPT [By pass] line or JGPM[VSP L-1 or L-2]line OR Despatch of DN Train towards PDT from Line No.4 or 5 or 6 or 7 or 8 to DN line or Middle Line. AND Reception of a DN train from JGPM[VSP line No.1 or Line .2] or GPT[By Pass] or 'B' Hut [KK] to Line No.12 or 13. AND Reception of a DN train from 'B' Hut [E.Co.Rly goods dispatch] line No. 4 or 5 or 6 or 7 or 8 OR Reception of a DN train from 'B' Hut[KK] Line or GPT [By pass] line or JGPM[VSP L-1 or L-2] line to Line No.4 or 5 or 6 or 7 or 8 AND Reception of UP train from PDT end from UP line or Middle line to Line No.2 or 3 or 6 or 7 or 8.</p>
8	Reception of train from KK single line from PDT end to line No.11.	And	<p>Despatch of train from Line 1 or 2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT OR Reception of a train from 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut[KK]Line or GPT [By pass]line or JGPM[VSP L-1 or L-2]line to Line No.4 or 5 or 6 or 7 or 8 AND Despatch of train from Line No.12 or 13 to JGPM[VSP Line -2]. OR Reception of train from JGPM[VSP Line -2]. to line 12 or 13. OR Despatch of a train from Line No.4 or 5 or 6 or 7 or 8 to DN line or Middle Line. OR Reception of UP train on Line No. 3 or 6 or 7 or 8 from UP line or Middle Line from PDT end .</p>
9	Reception of train from KK single line from PDT end to line No.12.	And	<p>Despatch of another train from Line No.1 or 2 to 'A' Cabin OR Despatch of another train from Line No.3 or 6 or 7 or 8 to GPT UP line. OR Despatch of another train from Line No.3 or 6 or 7 or 8 to 'A' Cabin. OR</p>

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			<p>Despatch of another train from Line No.1 or 2 to GPT UP line.</p> <p>AND</p> <p>Reception of train from GPT DN line to Line No.4 or 5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of train from 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut[KK]Line or GPT [By pass]line or JGPM[VSP L-1 or L-2]line to Line No.4 or 5 or 6 or 7 or 8.</p> <p>OR</p> <p>Reception of train from GPT[By Pass] line or JGPM[VSP line No.1 or Line No.2] to line No. 10 or 11.</p> <p>AND</p> <p>Reception of train from UP line or Middle line from PDT end to Line No.1 or 2 or 3 or 6 or 7 or 8 or 10 or 11</p> <p>OR</p> <p>Despatch of a train from Line No.4 or 5 or 6 or 7 or 8 or 10 or 11</p>
10	Reception of train from KK single line from PDT end to line No.13 setting of over lap to over run line .	AND	<p>Despatch of another train from Line No.1 or 2 to 'A' Cabin</p> <p>AND</p> <p>Despatch of another train from Line No.3 or 6 or 7 or 8 to GPT UP line</p> <p>OR</p> <p>Despatch of another train from Line No.3 or 6 or 7 or 8 to 'A' Cabin</p> <p>OR</p> <p>Despatch of another train from Line No.1 or 2 to GPT UP line.</p> <p>AND</p> <p>Reception of train from GPT DN line to Line No.4 or 5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of train from 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut [KK] Line or GPT [By pass]line or JGPM[VSP L-1 or L-2] line to Line No.10 and 11.</p> <p>OR</p> <p>Despatch of train from Line No.10 or 11 or 12 to 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut[KK]Line or GPT [By pass]line or JGPM[VSP L-1 or L-2] line</p> <p>OR</p> <p>Despatch of a train from Line No.4 or 5 or 6 or 7 or 8 or 10 or 11 to DN line or Middle line towards PDT end.</p> <p>AND</p> <p>Reception of UP train from UP line or Middle line from PDT end to Line No.1 or 2 or 3 or 6 or 7 or 8 or 10 or 11.</p>
11	Reception of an UP train from Middle line from PDT end to line No.1 or 2..	AND	<p>Despatch of another UP train from Line No.3 or 6 or 7 or 8 to GPT.</p> <p>OR</p>

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			<p>Despatch of another UP train from Line No.6 or 7 or 8 to 'B Hut [KK] line or GPT [By pass] Line or JGPM [VSP Line No 1 or Line No.2]</p> <p>AND</p> <p>Despatch of another UP train from line No.10 or 11 or 12 or 13 to 'B Hut [KK] line or GPT [By pass]Line or JGPM[VSP Line No 1 or Line No.2]</p> <p>OR</p> <p>Reception of DN train from GPT or 'B' Hut [E.Co.Rly Goods Despatch] or 'B' Hut[KK]Line or GPT [By pass]line or JGPM[VSP L-1 or L-2] to Line No.5 or 8 setting over lap to sand hump/over run line</p> <p>OR</p> <p>Reception of train from 'B' Hut [KK] or GPT[By Pass] or JGPM [VSP Line No.1 or Line 2] to Line No.10 [setting over lap to over run line or Intermediate starter signal No.16.] or Line No.11 or 12 or 13.</p> <p>OR</p> <p>Despatch of a train from Line No.12 or 13 to KK single line or DN line towards PDT</p> <p>OR</p> <p>Despatch of a DN train from Line No. 6 or 7 or 8 to DN line towards PDT end.</p>
12	Reception of an UP train from Middle line from PDT end to line No.6 set to sand hump.	AND	<p>Despatch of another train from line No.1 or 2,3,7,8 to 'A" Cabin.</p> <p>OR</p> <p>Despatch of a train from line No.1 or 2 or 3 or 7 or 8 to GPT on UP line.</p> <p>OR</p> <p>Reception of DN train from 'B' Hut (E.Co.Rly goods dispatch) line or 'B' Hut (KK) line or GPT (by Pass) line or JGPM (VSP L-1 or 2) or GPT DN line to Line No.5 or 8</p> <p>OR</p> <p>Reception of DN train from 'B' Hut [KK] line or GPT [By pass] line or JGPM [VSP line No.1 or Line No.2] or GPT DN line to line line No.10 or 11 or 12 or 13.</p> <p>OR</p> <p>Despatch of a DN train from Line No. 10 or 11 or 12 or 13 to KK Single Line or DN line towards PDT end..</p>
13	Reception of an UP train from Middle line from PDT end to line No.7.	AND	<p>Despatch of another train from Line No.1 or 2, 3 or 6 to 'A' cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train 'B' Hut (E.Co. Rly goods dispatch) line or 'B' Hut (KK) line or GPT (by pass) line or JGPM (VSP L-1 or 2) to line No.5 or 10,11,12,13.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line</p>

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			to line No.5 AND Reception of DN train from KK single line to Line No.10 or 11 or 12 or 13 from PDT end OR Despatch of a DN train from Line No.10 or 11 or 12 or 13 to DN line towards PDT end.
14	Reception of an UP train from Middle line from PDT end to line No.8 setting over lap to overrun line..	AND	Despatch of another train from line No.1 or 2,3,6,7 to 'A' Cabin or GPT UP line. OR Reception of a DN train 'B' Hut (E.Co.Rly goods dispatch) 'B' Hut (KK) line or GPT (by Pass) line or JGPM (VSP Line-1 or Line-2) to Line No.5 or 6 or 10 or 11 or 12 or 13. OR Reception of a DN train from GPT DN line to Line No.5 or 6. AND Reception of a DN train from KK single line to Line No.10 or 11 or 12 or 13 from PDT end.. OR Despatch of a DN train from Line No.10 or 11 or 12 or 13 to KK single line or DN line towards PDT end..
15	Reception of an UP train from Middle line to line No.10 setting over lap upto DS point No.143.	AND	Despatch of another train from Line No.1 or 2,3,6,7,8 to 'A' Cabin or GPT UP line. OR Reception of a DN train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No.2] to line No.5 or 6 or 7 or 8.. OR Reception of DN train from 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to line No.12 or 13. OR Reception of a DN train from KK single line PDT end to Line No.12 or 13. OR Despatch of train from line No. 12 or 13 to KK single line towards PDT end.
16	Reception of an UP train from Middle line to Line No.11.	AND	Despatch of another train from Line No.1 or 2 or 6 or 7 or 8 to 'A' Cabin or GPT UP line. OR Despatch of another train from Line No.3 or 6 or 8 to 'A' Cabin. OR Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.5 or 6 or 7 or 8/10,12,13.. OR

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			<p>Reception of DN train from GPT DN line to Line No.5 or 6 or 7 or 8. AND Reception of DN train from KK single line PDT end to Line No.12 or 13. OR Despatch of train from Line No.12 or 13 to KK single line towards PDT end.</p>
17	Reception of an UP train from Middle line to Line No.12.	AND	<p>Despatch of another train from Line No.1 or 2, 6, 7,8 to 'A' Cabin or GPT UP line. OR Despatch of another train from Line No.3 or 6 or 7 or 8 to 'A' Cabin. OR Reception of a train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.5 or 6 or 7 or 8,10. OR Reception of a DN train from GPT DN line to Line No.5 or 6 or 7 or 8.</p>
18	Reception of an UP train from Middle line to Line No.13 setting over lap up to overrun line. .	AND	<p>Despatch of another train from Line No.1 or 2, 6, 7, 8 to 'A' Cabin or GPT UP line. OR Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.5 or 6 or 7 or 8,10. OR Despatch of another train from Line No.10 or 11 or 12 to 'B' Hut [KK] line or GPT [By pass] line or JGPM [VSP line No.1 or line No.2]</p>
19	Reception of an UP train from UP line to Line No.1 or 2	AND	<p>Despatch of another UP train from Line No.3 or 6, 7, 8 to 'A' Cabin or GPT UP line. OR Reception of a train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.4 or 5 or 6 or 7 or 8. OR Despatch of a train from Line No.4 or 5 or 6 or 7 or 8 to Middle line or DN line or KK single line towards PDT end. OR Reception of a train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.10 or 11 or 12 or 13. OR Despatch of a train from Line No.10 or 11 or 12 to KK single line or DN line or Middle line towards PDT end. OR Despatch of UP train from Line No.6, 7 , or 8 to 'B' Hut[KK] line or GPT [By Pass]Line</p>

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			<p>or JGPM [VSP Line No.1 or Line No2] OR Despatch of a DN train from Line No.10 or 11 or 12 or 13 to 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] OR Reception of UP train from Middle line or KK single line to line No.3 or 6 or 7 or 8 or 10 or 11 or 12 or 13 from PDTend.</p>
20	Reception of an UP train from UP line to Line No.3.	AND	<p>Despatch of another UP train from Line No.1 or 2 to 'A' Cabin. OR Reception or dispatch train from GPT DN line or B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.4 or 5,10,11,12 or 13 to middle line or DN line or KK single line. OR .Despatch of train from line No.6 to 8 or 10 to 13 to B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] towards PDT end..</p>
21	Reception of an UP train from UP line to Line No.6 setting overlap to sand hump.	AND	<p>Despatch of UP train from Line No.1 or 2, 3, 7, 8 to 'A' Cabin or GPT UP line. OR Reception of a DN train from GPT DN line to line No.5 setting overlap to sand hump or line No.8 setting overlap to over run line. AND Despatch of train from line No.7 or 8 or 10 or 11 or 12 or 13 to 'B' Hut [KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]. OR Reception of train from or B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.8 or 10 or 11 or 12 or 13. OR Despatch of train towards PDT from line No.10 or 11 or 12 or 13 to KK single line or DN line or middle line.</p>
22	Reception of an UP train from UP line to Line No.7 . setting over lap upto end of Track circuit No.139T	AND	<p>Despatch of UP train from Line No.1 or 2, 3 to 'A' Cabin or GPT UP line. OR Despatch of a train from Line No.3 to 'A' Cabin. OR Reception of a DN train from GPT DN line to line No.5 setting overlap to sand hump. AND Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch), 'B' hut [KK]</p>

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			<p>line or GPT [By pass] or JGPM [VSP line No.1 or Line No.2] to line No.5 or 10 or 11 or 12 or 13.</p> <p>OR</p> <p>Despatch of UP train from Line No.10 or 11 or 12 or 13 to 'B' Hut (E.Co.Rly goods dispatch),'B' Hut [KK] line or GPT [By pass] line or JGPM [VSP line No.1 or line No.2].</p> <p>OR</p> <p>Despatch of train from Line No.10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of UP train KK single line to Line No.10 or 11 or 12 or 13.</p>
23	Reception of an UP train from UP line to Line No.8 . setting overlap to overrun line.	AND	<p>Despatch of UP train from Line No.1 or 2,3,6,7 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train from GPT DN line to line No.5 setting overlap to sand hump.</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to line No.5 or 10 or 11 or 12 or 13.</p> <p>OR</p> <p>Despatch of UP train from Line No. 6 or 7 or 10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2</p> <p>OR</p> <p>Despatch of train from Line No.10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of UP train from KK single line to Line No.10 or 11 or 12 or 13</p>
24	Reception of an UP train from UP line to Line No.10 setting over lap to DS point No.143.	AND	<p>Despatch of UP train from Line No.1 or 2, 3,6,7,8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 7 or 8.</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to line No.5 or6 or7 or 8 1 or 12 or 13.</p> <p>OR</p> <p>Despatch of UP train from Line No. 6 or 7 or 8 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2].</p>

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			<p>OR</p> <p>Despatch of train from Line No.12 or 13 to KK single line towards PDT end..</p> <p>OR</p> <p>Reception of a train from KK single line to line no.12 or 13.</p>
25	Reception of an UP train from UP line to Line No.11.	AND	<p>Despatch of UP train from Line No.1 or 2,3,7,8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to line No.5 or 6 or 8..</p> <p>OR</p> <p>Reception a DN train from VSP [L-2] to line No.13.</p> <p>OR</p> <p>Despatch of UP train from Line No. 6 or 7 or 8 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]</p> <p>OR</p> <p>Despatch of UP train from Line No.12 or 13 to VSP [L-2].</p> <p>OR</p> <p>Despatch of train from Line No. 12 or 13 to KK single line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line to Line No. 12 or 13</p>
26	Reception of an UP train from UP line to Line No.12.	AND	<p>Despatch of UP train from Line No.1 or 2, 3 6 or 7 or 8 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Despatch of another UP train from Line No.3 or 6 or 7 or 8 to GPT UP line.</p> <p>OR</p> <p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to line No.5 or 6 or 8 or10.</p> <p>OR</p> <p>Despatch of UP train from Line No. 6 or 7 or 8 or 10 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] line.</p>
27	Reception of an UP train from UP line to Line No.13 setting over lap to overrun line.	AND	<p>Despatch of UP train from Line No.1 or 2,3,6,7,8 to 'A' Cabin or GPT</p> <p>OR</p>

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			<p>Reception of a DN train from GPT DN line to Line No.5 or 6 or 8</p> <p>OR</p> <p>Reception of a DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT[By Pass] Line or JGPM[VSP Line No.1 or Line No2] to line No.5 or 6 or 8 or 10.</p> <p>OR</p> <p>Despatch of UP train from Line No. 6 or 7 or 8 or 10 or 11 or 12 to B' Hut (E.Co.Rly goods dispatch), 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] line.</p>
28	Reception of an DN train from GPT DN line to line No.4 setting overlap upto Intermediate starter signal No.12..	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.5 setting overlap to sand hump or 6,7,8,10,11,12,13.</p> <p>OR</p> <p>Despatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line or middle line towards PDT end.</p> <p>OR</p> <p>Reception of train from KK single line from PDT end to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP .</p> <p>OR</p> <p>Despatch of UP train from Line No.1 or 2 to 'A' Cabin or GPT UP line.</p>
29	Reception of an DN train from GPT DN line to Line No.5 setting over lap to sand hump.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.6 or 7 or 8,10,11,12,13</p> <p>OR</p> <p>Despatch of DN train from Line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line towards PDT end.</p> <p>OR</p> <p>Reception of train from KK single line or middle line and UP line from PDT end to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line or middle line.</p> <p>OR</p> <p>Despatch of UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p>
30	Reception of an DN train from GPT DN line to Line No.6.	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line</p>

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			<p>No.1 or Line No2] to Line No. 8,10,11,12,13.</p> <p>OR</p> <p>Despatch of DN train from Line No. 7 or 8 or 10 or 11 or 12 or 13 to DN Line or KK Single line towards PDT end.</p> <p>OR</p> <p>Despatch of train from Line No. 7 or 8 or 10 or 11 or 12 or 13 to "B' Hut [KK] or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2].</p> <p>OR</p> <p>Reception of train from KK single line or middle line and UP line from PDT end to Line No. 7 or 8 or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line or Middle line</p> <p>OR</p> <p>Despatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
31	Reception of an DN train from GPT DN line to Line No.7 or 8	AND	<p>Reception of another DN train from B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.10 or 11 or12 or 13.</p> <p>OR</p> <p>Despatch of a train from Line No.10 or 11 or 12 or 13 to B' Hut (E.Co.Rly goods dispatch) 'B' Hut[KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]</p> <p>OR</p> <p>Reception of train from KK single line from PDT end to Line No. 10 or 11 or 12 or 13</p> <p>AND</p> <p>Reception of UP train on line No.1 or 2 or 3 from UP line or Middle line</p> <p>OR</p> <p>Despatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
32	Reception of an DN train from 'B' Hut (E.Co.Rly goods despatch) to line No.4 or 5 setting overlap upto Intermediate Starter Signal No.12.	AND	<p>Reception of another DN train from 'B' Hut [KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.6 or 7 or 8 or 10 or 11 or 12 or 13</p> <p>OR</p> <p>Despatch of a train from Line No.6 or 7 or 8 or10 or 11 or 12 or 13 to KK single line or DN line towards PDT end..</p> <p>OR</p> <p>Despatch of train from Line No. 6 or 7 or 8 or 10 or11 or 12 or 13 to 'B' Hut [KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]</p> <p>OR</p> <p>. Reception of train from KK single line from PDT end to Line No..6 or 7 or 8 or 10</p>

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			<p>or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line</p> <p>OR</p> <p>Despatch of UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line.</p>
33	<p>Reception of a DN train from 'B' Hut (E.Co.Rly goods despatch) to line No.6/line No.7 or Line No.8</p> <p>OR Reception of DN train on line No.4.</p>	AND	<p>Reception of another DN train from "B' Hut [KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.10 or 11 or 12 or 13</p> <p>. OR</p> <p>Despatch of a train from Line No. 10 or 11 or 12 or 13 to KK single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.10 or 11 or 12 or 13 to "B' Hut [KK] line or GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]</p> <p>OR</p> <p>Reception of a train from KK Single line or middle line from PDT end to line No.10 or 11 or 12 or 13 .</p> <p>AND</p> <p>Reception of an UP train on line No. 1 or 2 or 3 from UP line or middle line.</p> <p>OR</p> <p>Despatch of an UP train from line No.1 or 2 or 3 to 'A' Cabin or GPT up line.</p>
34	<p>Reception of a DN train from 'B' Hut (E.Co.Rly goods despatch) to line No.10 setting over lap up to overrun line.</p>	AND	<p>Reception of another DN train from JGPM [VSP Line No.1 or Line No2] to Line No.11 or 12 or 13.</p> <p>.OR</p> <p>Despatch of an UP train from line No.11 or 12 or 13 to JGPM [VSP line No.1 or line No.2].</p> <p>OR</p> <p>Despatch of a DN train from Line No. 11 or 12 or 13 to KK single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception and dispatch of a DN train from line No.4 or 5 or 6 or 7 or 8 to middle line or DN line or KK single line from GPT DN line.</p> <p>OR</p> <p>Despatch of a train from line No. 5 or 6 or 7 or 8 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of an UP train on line No. 1 or 2 or 3 from UP line or middle line or KK single line from PDT end..</p> <p>OR</p> <p>Reception of train from KK single line or middle line or UP line from PDT end to line</p>

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			No.11 or 12 or 13.
35	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.11	AND	Reception of another DN train from JGPM [VSP Line No.2] to Line No.12 or 13. .OR Despatch of an UP train from line No. 12 or 13 to JGPM [Line No.2] .OR Despatch of an UP train from Line No.12 or 13 to KK single line towards PDT end. .OR Reception and dispatch of a DN train from line No.4 or 5 or 6 or 7 or 8 to middle line or DN line or KK single line from GPT DN line. .OR Reception of a train from KK single line from PDT end to line No. 12 or 13 .OR Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line from PDT end.. .OR Despatch of an UP train from Line No.1 or 2 or 3 to 'A' Cabin or GPT UP line.
36	Reception of a DN train from 'B' Hut (E.Co.Rly goods dispatch) to line No.12/13.	AND	Reception of another DN train from line No.4 or 5 or 6 or 7 or 8 to middle line or DN LINE OR KK single line from GPT DN line. .OR Reception of a train on line No.6 or 7 or 8 from UP line or Middle line or KK single line from PDT end. .OR Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line from PDT end.. .OR Despatch of an UP train from line No.1 or 2 or 3 to 'A' Cabin or GPT UP line.
37	Reception of a DN train from 'B' Hut (KK) to line No.4/line No.5	AND	Reception of another DN train from GPT [By Pass] line or JGPM [VSP Line No.1 or Line No2] to Line No.10 or 11 or 12 or 13. .OR Despatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end. .OR Despatch of train from Line No.10 or 11 or 12 or 13 to GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2]. .OR Reception of a train from KK single line from PDT end to Line No.6 (Setting overlap to overrun line) or 10 or 11 or 12 or 13.
38	Reception of a train from 'B' Hut (KK) line to line No.6/7/8.	AND	Reception of another train from GPT [By Pass] Line or JGPM [VSP Line No.1 or Line No2] to Line No.10 or 11 or 12 or 13.

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			<p>OR</p> <p>Despatch of a train from line No.10, or 11 or 12 or 13 to KK single line or DN line or middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.10 or 11 or 12 or 13 to GPT (By pass) line or JGPM [VSP line No.1 or line No.2].</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to line No.10 or 11 or 12 or13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line.</p> <p>OR</p> <p>Despatch of an UP train from Line No.1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 [Setting overlap to sand hump] from GPT end.</p>
39	Reception of a DN train from 'B' Hut (KK) line No.10.[setting over lap to over run line].	AND	<p>Reception of another DN train from JGPM [VSP Line No.1 or Line No2] to Line No. 11 or 12 or 13.</p> <p>OR</p> <p>Despatch of a train from line No. 6 or 7 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.11 or 12 or 13 to JGPM [VSP Line No.1 or Line No2]</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No.11 or 12 or 13.</p> <p>AND</p> <p>Reception of a train from 'B' Hut [E.Co.Rly goods dispatch] line to line No. 4 or 5 or 6 or 7 or 8</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single.</p> <p>OR</p> <p>Despatch of an UP train from line No.1 or 2 or 3 or 5 or 6 or 7 or 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train on line No. 4 or 5 from GPT end.</p>
40	Reception of a DN train from 'B' Hut (KK) to line No.11..	AND	<p>Reception of another DN train from JGPM [VSP Line No.2] to Line No. 12 or 13.</p> <p>OR</p> <p>Despatch of a train from line No.6 or 7 or 8 to KK single line or DN line or Middle line</p>

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			<p>towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.12 or 13 to JGPM [VSP line No.2].</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to line No.6 or 7 or 8</p> <p>OR</p> <p>Reception of a train from 'B' Hut [E.Co.Rly goods dispatch] line to line No. 4 or 5 or 6 or 7 or 8.</p> <p>OR</p> <p>Despatch of a train from line No.4 or 5 or 6 or 7 or 8 to KK single line or DN line or Middle line.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK Single line.</p> <p>OR</p> <p>Despatch of an UP train from Line No1 or 2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train on line No.4 or 5 from GPT end.</p>
41	Reception of a DN train from 'B' Hut (KK) to line No.12 or Line No.13	AND	<p>Reception of another train from 'B' Hut (E.co.Rly goods dispatch) line to line No. 4 or 5 or 6 or 7 or 8.</p> <p>AND</p> <p>Reception of a train on line No. 1 or 2 or 3 from Up line from PDT end.</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK Single line from PDT end.</p> <p>OR</p> <p>Despatch of a train from Line No.6 or 7 or 8 to KK single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.4 or 5 or 6 or 7 or 8 to KK single line or Middle line</p> <p>AND</p> <p>Reception of an UP train on line No. 1 or 2 or 3 from Middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from line No.1 or 2 or 3 or 6 or 7 or 8 to 'A' cabin or GPT UP line.</p> <p>OR</p> <p>Reception of a DN train on line No.4 or 5 from GPT end.</p>
42	Reception of DN train from GPT [By pass] line to line	AND	Reception of another DN train from JGPM [VSP line No.1 or line No.2] to line No.11 or

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	No.4/line No.5.		<p>12 or 13.</p> <p>OR</p> <p>Despatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.11 or 12 or 13 to JGPM [VSP line No.1 or line No.2].</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to line No.6 (Setting overlap to sand hump) or 8 (setting overlap to overrun line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from PDT UP line.</p> <p>OR</p> <p>Despatch of a train an UP train from line No.1 or 2 or 3 to 'A' Cabin.</p>
43	Reception of a DN train from GPT [By pass] to line No.5 setting overlap to sand Hump.	AND	<p>Reception of another DN train from JGPM [VSP line No.1 or Line No.2] to line No.11 or 12 or 13.</p> <p>OR</p> <p>Despatch of a train from line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to KK single line or DN line or middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from line No.11 or 12 or 13 to JGPM [VSP line No.1 or line No.2]</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to Line No.6 (Setting over lap to Sand hump) or.8 (Setting over lap to over run line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from line No.1 or 2 or 3 to 'A' cabin or GPT UP line from UP line or middle line or KK single line from PDT end.</p> <p>AND</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .</p> <p>AND</p> <p>Reception of a DN train fro m GPT DN line to line No.4</p>

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44	Reception of a train from GPT [By pass] to line No.6/7/8.	AND	<p>Reception of another train from JGPM [VSP Line No.1 or Line No2] to Line No.11 or 12 or 13.</p> <p>.OR</p> <p>Despatch of a train from line No.10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from Line No.11 or 12 or 13 to JGPM [VSP Line No.1 or Line No2].</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No.. 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 [Setting overlap to sand hump].from GPT end..</p> <p>OR</p> <p>Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line) to line No.4 or 5 [Setting overlap to sand hump].</p>
45	Reception of a train from GPT[By pass] to line No. 10 [Setting overlap to overrun line].	AND	<p>Reception of another train from JGPM [VSP Line No.1 or Line No2] to Line No.11 or 12 or 13.</p> <p>.OR</p> <p>Despatch of a train from line No.6 or 7 or 8 or 11 or 12 or13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from Line No.11 or 12 or 13 to JGPM [VSP Line No.1 or Line No2].</p> <p>OR</p> <p>Reception of a train from KK single line or Middle or UP line from PDT end to Line No.6 or 7 or 8 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line..</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5[setting over lap to sand hump] or 6 or 7 or</p>

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			8 from GPT end. OR Reception of a train from 'B' hut [E.Co.Rly goods dispatch line]/'B' Hut [KK] line to line No.4 or 5 [setting overlap to sand hump] or 6 or 7 or 8.
46	Reception of a train from GPT [By pass] to line No.11.	AND	Reception of another DN train from JGPM [VSP Line No.2] to Line No. 12 or 13. .OR Despatch of a train from line No. 6 or 7 or 8 to KK Single line or DN line or Middle line towards PDT end. OR Despatch of a train from KK single line from line No.12 or13. OR Despatch of a train from line No.12 or 13 to JGPM [VSP line No.2] OR Reception of a train from KK single line or middle line or UP line from PDT end to line No.6 or 7 or 8. OR Reception of a train from KK single line to Line No.12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line AND Reception of a DN train on line No.4 or 5 [Setting overlap to sand hump] or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line]/'B' Hut [KK] line to line No.4 or 5 [Setting overlap to sand hump] or 6 or 7 or8..
47	Reception of a train from 'GPT [by pass] line to line No.12.	AND	Despatch of a train from line No.6 or 7 or 8 to KK Single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8. OR Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line. AND.

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			<p>Reception of a DN train on line No.4 or 5 [Setting overlap to sand hump] or 6 or 7 or 8 from GPT end.</p> <p>.OR</p> <p>Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] to line No.4 or 5 [Setting over lap to sand hump] or 6 or 7 or 8.</p>
48	Reception of a train from GPT [By pass] to line No.13 [setting over lap to over run line].	AND	<p>Despatch of a train from line No.6 or 7 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line from PDT end to Line No6 or 7 or 8 or 10.</p> <p>OR</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UPm line or middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 [Setting overlap to sand hump] or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' hut [E.Co.Rly goods dispatch] line to Line No.4 or 5 [setting overlap to sand hump] or 6 or 7 or 8.</p>
49	Reception of a DN train from JGPM [VSP line No.1] to line No.4.	AND	<p>Reception of another DN train from JGPM [VSP Line No2] to Line No.12 or13.</p> <p>.OR</p> <p>Despatch of a train from line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to KK single line or DN line towards PDT end.</p> <p>OR</p> <p>Despatch of a train from Line No.12 or 13 to JGPM [VSP Line No2].</p> <p>OR</p> <p>Reception of a train from KK single line from PDT end to line No.6 (Setting overlap to Sand hump) or 8 (setting overlap to overlap to overline line) or 10 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line.</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .</p>
50	Reception of a DN train from JGPM [VSP line No.1] to line No.5 [Setting overlap to overrun line]	AND	<p>Reception of another train from JGPM [VSP line No. 2] to line No.12 or 13.</p> <p>OR</p> <p>Despatch of a train from line No.6 or 7 or 8</p>

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			<p>or 10 or 11 or 12 or 13 to KK single line or DN line or middle line towards PDT end. OR Despatch of a train from line No.12 or 13 to JGPM [VSP line No.2] OR Reception of a train from KK single line or Middle line from PDT end to Line No. 6 [Setting overlap to sand hump] or 8 (Setting overlap to overrun line) or 10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line from UP line or middle line or KK single line from PDT end. AND Despatch of an UP train from Line No. 1 or 2 or 3 or 6 or 7 or 8 to 'A' Cabin or GPT UP line AND Reception of a DN train from GPT DN line to line No.4 .</p>
51	Reception of a DN train from JGPM [VSP line No.1] to line No.6/7/8.	AND	<p>Reception of another train from JGPM [VSP line No.2] to line No.12 or 13. OR Despatch of a train from line No.10 or 11 or 12 or 13 to KK single line or DN line or middle line towards PDT end. OR Despatch of a train from line No.12 or 13 to JGPM [VSP line No.2]. OR . Reception of a train from KK single line or Middle line from PDT end to Line No.10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line . OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line AND Reception of a DN train on line No.4 or 5 [setting overlap to sand hump] from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] to line No.4 or 5 or 6 or 7 or 8..</p>
52	Reception of a DN train from JGPM [VSP line No.1] to line	AND	Reception of another train from .JGPM [VSP Line No.2] to Line No12 or 13.

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	<p>No.10 [Setting overlap to overrun line].</p>		<p>.OR Despatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end. OR Despatch of train from Line No.12 or 13 to JGPM [VSP Line No2]. OR Reception of a train from KK single line or middle line or UP line from PDT end to line No.6 or 7 or 8 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line. AND Reception of DN train on line No.4 or 5 [Setting overlap to sand hump] or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' hut [E.Co.Rly goods dispatch line] or 'B' Hut [KK] line to line No.4 or 5 (setting over lap to sand hump)or 6 or 7 or 8.</p>
<p>53</p>	<p>Reception of a DN train from JGPM [VSP Line No.1] to line No.11.</p>	<p>AND</p>	<p>Reception of another train from JGPM [VSP Line No.1 or Line No2] to Line No.12 or 13. .OR Despatch of a train from line No. 6 or 7 or 8 to KK Single line or DN line or Middle line towards PDT end. OR Despatch of a train to KK single line from Line No.12 or 13.. OR Despatch of a train from Line No.12 or 13 to JGPM [VSP line No.2]. OR .Reception of a train from KK single line or Middle line or UP line from PDT end to Line No..6 or 7 or 8. OR Reception of a train from KK single line to line No.12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line. OR Despatch of an UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of DN train from on line No.4 or 5 or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] or 'B' Hut [KK] line or</p>

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			GPT [By pass] line to line No.4 or 5 or 6 or 7 or 8. OR Reception of a train from GPT [By pass] line to line No.10 [Setting overlap to overrun line].
54	Reception of a DN train from JGPM [VSP line No.1] to line No.12.	AND	Despatch of a train from line No. 6 or 7 or 8 on KK Single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line or UP line from PDT end to Line No.6 or 7 or 8. OR Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line. OR Despatch of an UP train from line No.1 or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of a DN train on line No.4 or n5 or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods Despatch line] 'B' Hut [KK] to line No.4 or 5 or 6 or 7 or 8.
55	Reception of a DN train from JGPM [VSP line No.1] to line No.13[Setting over lap to overrun line.	AND	Despatch of a train from line No.6 or 7 or 8 or 10 or 11 or 12 or13 on KK Single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 10 [Setting overlap to DS point No.143] OR Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] , 'B; Hut [KK] or GPT [By pass] to line No.4 or 5 or 6 or 7 or 8 or 10.
56	Reception of a DN train from JGPM [VSP line No.2] to line no.4.	AND	Despatch of a train from line No.6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end. OR Reception of a train from KK single line from PDT end to Line No. 6[setting over lap

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			to sand hump] or 8 [setting over lap to overrun line] or 10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line .
57	Reception of a DN train from JGPM [VSP line No.2] to line No.5[setting over lap to sandhump].	AND	Despatch of a train from line No. 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line from PDT end to Line No. 6 [setting over lap to sand hump] or 8 [setting over lap to overrun line] 10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line.. OR Despatch of an UP train from line No.1 or 2 or 3 to 'A' Cabin or GPT UP line from UP line or middle line or KK single line from PDT end. AND Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line . AND Reception of DN train from GPT DN line to line No.4.
58	Reception of a DN train from JGPM [VSP line No.2] to line No.6/7/8.	AND	Despatch of a train from line No.10 or 11 or 12 or 13 to KK Single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line from PDT end to Line No. 10 or 11 or 12 or 13. AND Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line. OR Despatch of an UP train from line No.1 or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of a DN train on line No.4 or 5 [setting over lap to sand hump]from GPT end. OR Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] to line No.4 or 5
59	Reception of a DN train from JGPM [VSP line No.2] to line No.10 [Setting overlap to overrun line].	AND	Despatch of a train from line No. 6 or 7 or 8 or 11 or 12 or 13 to KK Single line or DN line or middle line towards PDT end. OR

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			<p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8 or 11 or 12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5[setting over lap to sand hump] or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut[E.Co.Rly goods dispatch line] to line No.4 or 5 [setting over lap to sand hump] or 6 or 7 or 8</p>
60	Reception of a DN train from JGPM [VSP line No.2] GPT[By Pass] to line No.11.	AND	<p>Despatch of a train from line No. 6 or 7 or 8 KK Single line or DN line or Middle line towards PDT end.</p> <p>OR</p> <p>Despatch of a train to KK single line from Line No. 12 or 13.</p> <p>OR</p> <p>Reception of a train from KK single line or Middle line or UP line from PDT end to Line No. 6 or 7 or 8.</p> <p>OR</p> <p>Reception of a train to KK single line to Line No.12 or 13.</p> <p>AND</p> <p>Reception of an UP train on line No.1 or 2 or 3 from UP line or Middle line or KK single line.</p> <p>OR</p> <p>Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line.</p> <p>AND</p> <p>Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end.</p> <p>OR</p> <p>Reception of a train from 'B' Hut [E.Co.Rly goods dispatch line] 'B' Hut[KK] line or GPT [By pass] line to line No.4 or 5 or 6 or 7 or 8</p> <p>OR</p> <p>Reception of train from GPT [By pass] line to line No.10 [Setting overlap to over run line]</p>
61	Reception of a DN train from JGPM [VSP- LINE No.1] to line No.12	AND	<p>Despatch of a train from line No. 6 or 7 or 8 or 10 or 11 or 12 or 13 to KK Single line or DN line towards PDT end.</p> <p>OR</p> <p>Reception of a train from KK single line or middle line or UP line from PDT end to Line</p>

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			No.6 or 7 or 8. OR Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line. OR Despatch of an UP train from Line No. 1 or 2 or 3 to 'A' Cabin or GPT UP line . AND Reception of a DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut[E.Co.Rly goods dispatch line], 'B' Hut [KK], GPT [By pass] to line No.4 or 5 or 6 or 7 or 8..
62	Reception of a DN train from JGPM [VSP- LINE No.1] to line No.13[setting over lap to over run line]	AND	Despatch of a train from Line No.6 or 7 or 8 or 10 or 11 or 12 on KK single line or DN line or Middle line towards PDT end. OR Reception of a train from KK single line or Middle line or UP line from PDT end to Line No.6 or 7 or 8 or 10 (setting over lap to DS point No.143) OR Reception of an UP train on line No.1 or 2 or 3 from UP line or middle line or KK single line. OR Despatch of an UP train from Line No. 1or 2 or 3 to 'A' Cabin or GPT UP line. AND Reception of DN train on line No.4 or 5 or 6 or 7 or 8 from GPT end. OR Reception of a train from 'B' Hut[E.Co.Rly goods dispatch line] , 'B' Hut[KK] line or GPT [By pass] line to line No.4 or 5 or 6 or 7 or 8 or 10.

C.Note: A derailing switch (D.S.Point) No 143 is provided on line No 10 at south end as per CRS CAL letter No R120/9/14/2006-SEC/960 Dated 01.11.06 while permitting coaching traffic on By pass line. Since the signal over lap for Up trains coming on line No 10 Ex PDT is given up to trailing point of 146 'B' there will be no exchange in the simultaneous reception /despatch.

6.5 **COMPLETE ARRIVAL OF TRAINS:**

The entire block section between PDT-SCMN on both Up, Down, Middle ,KK Lines and SCMN-JGPM Line-1,Line-2 are monitored by axle counter system and the position of the block section whether 'Occupied' or 'Clear' is indicated on Panel at SS/SM's office. As soon as train enters in to that block section the RED indication appears on Panel. After whole train clears the block section GREEN indication appears on the Panel. This confirms the complete arrival of train and the SS/ SM on duty shall give 'Train Out of Block Section' report on seeing the section clear indication GREEN on the Panel.

If a train passes through the station without conforming the last vehicle indicator, the SS/Station Master on duty shall advise the station in advance to stop the train for last vehicle verification and he need not to withhold closing of block section in rear. He shall obtain confirmation under exchange of private number about the complete arrival of the train with its last vehicle from the station in advance and subsequent trains may be dispatched.

In case of failure of Axle counter the SS/SM on duty shall obtain Complete Arrival Certificate

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from the guard of the train in the Complete Arrival Register (T/1410) maintained at the station for stopping train. For through passing train the SS/SM on duty shall satisfy himself the complete arrival of the train by verification of the Last Vehicle Indicator vide SR 4.16.05 that the train arrived complete.

In case a train passes incomplete, action shall be taken as per SR.4.17.02, the "Train out of Block Section" report shall be withheld to the station in rear until Complete

Arrival Certificate is received from the station in advance supported by a private number. Train passing on adjacent line shall be stopped and Guard and loco pilot shall be issued with caution Order to proceed cautiously and stop short of any obstruction as per SR. 4.17.03. On occasions when motor trolley follows a train the points shall not be operated until the following motor trolley is admitted on the same line. In the event of motor trolley is delayed in the section the SS/SM on duty shall take action in terms of SR.15.25.03 (b) (vi).

6.6 DESPATCH OF TRAINS:

To dispatch a train, the Station master on duty having obtained line clear for that train, shall set the route for the outgoing train correctly and satisfy himself by observing the visual indication on the Indication Panel Board.. He shall suspend all non-isolated shunting and the SS/SM will ensure that the Level crossing Gate is closed against road traffic and then shall take "OFF" the concerned route starter and advanced starter signal. The 'OFF' aspect of the route starter and advanced starter is the authority to proceed into the block section. As soon as the train passes the Dn advanced starter signal, Train entering section indication will appear on the panel. The SS/SM will then send the train entering given section signal to the station in advance. [Refer GR 3.38, 3.42, SR 3.36.04(b), 3.42.04 and BWM 2.07.5(a)]

DESPATCH OF TRAINS ON DN LINE, MIDDLE LINE AND K.K LINE BETWEEN SCMN-PDT :

The Advanced starter signal No 20, 204 & 206 of SCMN shall be taken 'OFF' only when the 'Axle counter' clear indication available on the Panel.

The SS/SM on duty shall watch the safe passage of the train with its last vehicle indicator.. If a train is worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed. The Interlocked Level crossing gate shall remain closed against road traffic for dispatch of trains. [Refer SR 4.23.02 & 4.25.02]

DESPATCH OF TRAINS ON VSP LINE-1,VSP LINE-2 BETWEEN SCMN-JGPM:

The Advanced starter signal No 73 & 75 of SCMN shall be taken 'OFF' only when the 'Axle counter' clear indication available on the Panel.

The SS/SM on duty shall watch the safe passage of the train with its last vehicle indicator.. If a train is worked without Guard or Brake Van the instruction laid down in Subsidiary Rule shall be followed.

Note: Before dispatching train into SCMN-PDT and SCMN-JGPM block section, the SS/SM on duty shall ensure the closure of the L.C.gate from the gateman on duty supported by a Private Number.

6.7 TRAINS RUNNING THROUGH:

- a.) The provision of GR 3.40, 4.17, 4.42 with relevant SRs and SR 3.42.02(a)(iv) and other relevant provision of BWM shall be observed.
- b.) The sequence for taking 'OFF' signals for run through trains is governed by SR 3.42.02 (a).
- c.) In every case in which trains are permitted to run through on a non isolated line, all shunting shall be stopped and no vehicle unattached to an engine or not properly secured in accordance with rule 5.23 may be kept standing on a connected line which is not isolated from through line vide SR 4.11(2).
- d.) The SS/SM on duty is responsible to see that a train passes complete with its last vehicle

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indicator. If a train passes without last vehicle indicator or its authorized substitute, action shall be taken as per General and Subsidiary Rule. [Ref GR 3.42,4.17 4.42,& SR 4.42.02 (b) (i) ,(ii), (iii),c & (d)]

6.8 WORKING IN CASE OF FAILURE:

PROCEDURE TO BE FOLLOWED FOR WORKING OF TRAINS DURING FAILURE /SUSPENSION OF INTERLOCKING /SIGNALS/ POINTS:

A. TRACK CIRCUITS:

In case of failure of track circuits, the clearance of the concerned line should be ensured physically before a train is piloted.

B. AXLE COUNTER:

If the axle counter fails between the block sections, resetting procedure will be adopted as per SWR (APP-B) . if the axle counter indication does not appear 'GREEN & continues to show 'RED' condition after resetting, the concerned block section shall be suspended & failure intimation to be given to sectional signal Maintainer /JE/SSE (signal) for rectification.

C. BLOCK INSTRUMENTS

In the event of partial/total failure of block instrument the concerned block instrument shall be suspended till its rectification and trains shall work as per GR. [Refer SR 6.02.03 & 6.02.06] During this period of time the authority will be T/369(3b) with identification number and Private Number issued from the station in advance written both in figure and words.

D. RECEPTION OF A TRAIN ON BLOCKED LINE

Whenever trains are to be admitted on an obstructed line it is necessary that the train are piloted IN on a written authority given by the SS/SM on duty and delivered by a competent Railway servant to the Loco Pilot of the train or by taking off the calling on signal. [Refer GR 5.09 & SRs there to].

E. RECEPTION OF TRAIN ON NON-SIGNALLED LINE

Before receiving a train on non-signaled line, the SS/SM shall ensure that-

- a) The train is brought to a stand at the first stop signal.
- b) The line on which it is intended to receive the train is clear up to the trailing points or up to the place at which the train is required to come to a stand.
- c) All points over which the train has to pass are correctly set, the facing and trailing points are clamped and padlocked and
- d) The loco pilot is authorized to pass the approach stop signals at 'ON' through a written authority. [Refer GR 5.10].

F. DEFECTIVE SIGNALS:

When signals become defective, the procedure laid down in GR & SR shall be followed. A signal in the OFF position is the final indication that the points are correctly set for the route for which it applies and if it is found impossible to take OFF a signal, the setting of points on the route to which it applies shall be inspected by the SS/SM on duty before the signal is declared as defective irrespective of what is indicated by the position of the route, [Refer GR 3.68 to 3.71, 3.80 and SR 3.68.01 (c)].

In case of disconnection of signal and interlocking for repairs and maintenance, procedure laid down in GR and relevant SRs shall be followed. In the event of signal showing no lights, Station Master on duty shall before giving line clear initiate action in accordance with the procedure prescribed in GR and the relevant SRs. [Refer GR 3.51, 3.69, 3.49 (4), 3.68 to 3.77]

G. DEFECTIVE INTERLOCKING

When interlocking becomes defective the SS/SM on duty shall be responsible for correct setting, clamping and padlocking of points for admission of train. [Refer SR 3.69.03 (a) & (c).

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H. DEFECTIVE/DAMAGED POINTS

When any point fails to operate normally by the route setting operation through Panel it is inevitable to operate the points with crank handle. The SS/SM on duty shall personally ensure clamping and padlocking of all facing and trailing points on the route. Crank handles are interlocked with signals and interlocking system. When points become defective, the signals controlling these points shall be considered defective and vice-versa and the procedure for use of crank handle. For motor operated points shall be followed as per operating manual para-20.06.

SS/SM on duty shall personally ensure the clamping and padlocking of all facing and trailing points. An emergency Crank handle register shall be maintained by the SS/SM on duty at the station as per Para 20.06(d) of the Operating Manual. Correct setting clamping and padlocking of the points devolve on the SS/SM on duty. (Details of use of Crank Handle as per Appendix-'B'). The cases of the failures of the motor point should be promptly reported to the concerned signal maintainer/signal inspector for immediate rectification.

6.9 PROVISIONS FOR WORKING OF TROLRIES/ MOTOR TROLRIES/MATERIAL LORRIES ETC"

Motor trolleys are to run in accordance with rules laid down in SRs. Material Lorries will work in accordance with SR. [Rules laid down in BWM. Refer SR 15.25.03 to 15.25.07, 5.11(2), 5.12, 5.13 of BWM]

- i) Trolleys, Motor Trolleys, Lorries which are not insulated shall not be allowed to run except on Line clear.
- ii) Motor Trolleys/Tower Wagon/material Lorries are not likely to actuate the Axle Counter correctly.
- iii) In all other respects the Working of a light motor trolley shall conform to the rules laid down for ordinary trolleys while running without block protection and to those laid down for motor trolleys while running under block protection or following another light motor trolley.

7.0 BLOCKING OF THE LINES:

When a running line is block by stabled load, wagon, vehicle or by a train which is to cross or give precedence to another train or immediately after arrival of a train at the station the points at either end on single line section should be immediately set against the block line except when shunting or any other movement is required to be done immediately in that direction on that line. A clear remark in 'RED' ink shall be made immediately in the train signal register and a record shall be made in the Station Master's diary also. Stable load register is also to be maintained. The stable load or loose vehicles are to be secured to prevent rolling down of vehicles. [Refer SR 3.36.3(b), GR 5.23 and SR 5.23.01]

A. SECURING OF VEHICLES: -

As far as practical, loose vehicle shall not be allowed to stand on the running line. However under unavoidable circumstances, if it is necessary to detach vehicle from a train or to stable a train and leave them standing on the running line, the SS/SM on duty shall be responsible to secure the vehicle/stable loads to prevent rolling down of vehicles and arrest obstruction and fouling.

NOTE

Special care should be taken to secure special type vehicles fitted with roller bearing while standing in siding or in running lines. [Refer GR 5.23 & SR 5.23.01]

8.0 SHUNTING**8.1 GENERAL PRECAUTIONS.**

Shunting will be carried out at the station in accordance with General Rule and relevant Subsidiary Rules and Block working Manual [Refer GR 3.46, 3.52 to 3.56, 5.13 to 5.23, 8.09 to 8.15] The SS/SM on duty is authorized to supervise shunting operation. Normally back shunt, shunt below starters and intermediate starter signals shall be used for shunting operations. The

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official supervising the shunting shall ensure the correct setting, clamping and padlocking of points in case of Non signaled movements.

The SS/SM on duty and the official supervising shunting shall cooperate with each other regarding shunting operations. Neither reception signals nor departure signals shall be taken 'OFF' unless the shunting is isolated and the path of incoming or outgoing train is free from obstructions. The over run line may be used as shunting neck.

NOTE:

For any non signaled movement physical verification of the clearance of the crossover points shall be ensured by the Guard/SS/SM on duty for supervising shunting operations.

8.2 SHUNTING IN FACE OF AN APPROACHING TRAIN:

Shunting in the face of an approach train is strictly prohibited.

8.3 PROHIBITION OF SHUNTING SPECIAL FEATURES IF ANY:

(i) Hand shunting /Fly shunting is prohibited at both ends of the yard.

(ii) For shunting end of the yard, Engine should be leading towards the falling gradient.

8.4 SHUNTING OUTSIDE STATION SECTION:-

- (a) When line clear has been given, no shunting shall be permitted in the block section rear vide GR. 8.05[2].
- (b) Shunting or obstruction for any other purpose shall not be permitted in block section in rear unless it is clear and is blocked back.
- (c) Shunting or obstruction for any other purpose shall not be permitted in block section in advance unless it is clear and is block forward vide GR 8.06.(3).

8.5 SHUNTING WITHIN STATION SECTION :

If necessary signals are kept at "ON", shunting may be carried on within the station section but this shall be done only when there is no approaching train since shunting in the face of an approaching train is prohibited at this station.

8.6 SHUNTING IN THE SIDING TAKING OFF FROM THE STATION YARD :

While performing shunting in the sidings it should be authorized by issuing T/806 clearly mentioning the limits up to which shunting is permitted as also the lines, occupied in shunting. The relevant provisions of GR 5.14 and SR thereto shall be meticulously followed.

9.0 ABNORMAL CONDITION:-

- a.) The rules to be observed in the event of abnormal conditions.
 - i) During partial interruption /failure of electrical communications instrument. During partial interruption of communications train shall be worked in accordance with BWM 5.16 & 5.23 and SR 6.02.06.
 - ii) The authority to proceed in the occupied block section in case of obstruction of line or accident etc. Rules and regulations for working of trains on obstructed line in case of obstructions or accident on the authority of Block Ticket T/A 602 when communications are available shall be followed in accordance with the provisions of SR 6.02.02 and 06.02.05.
 - iii) Trains delayed in Block Section:
The rules laid down in GR 6.04 shall be observed
- b.) **REPORTING FAILURE OF POINTS, TRACK CIRCUITS AND INTERLOCKING :**

Whenever there is a failure of points, track circuits/axle counters or any other interlocking gear at the station the failure should be reported by SS/SM on duty to the concerned signal maintenance staff on duty responsible for attending the failure and only after the receipt of the written memo from the signal maintenance staff for rectification of the fault SS/SM on duty should restore the normal working after testing for its normal function SR 3.51.04 & SR 3.77.01 shall be followed.

The entries in failure register to be done with message to the section controller.

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9.1 TOTAL FAILURE OF COMMUNICATION: -

- a.) In the event of total failure of all communications, trains shall be worked in accordance with provisions of SR 6.02.05.
- b.) During partial interruption of communications the rules laid down in SR 6.02.03 shall be followed.

9.2 TEMPORARY SINGLE LINE WORKING ON DOUBLE LINE SECTION :

During Temporary Single Line working on one clear line when one line is obstructed either between SCMN-PDT and SCMN-GPT, train shall be worked as per the procedure.

9.3 DESPATCH OF TRAINS UNDER AUTHORITY TO PROCEED WITHOUT LINE CLEAR OR TO ASSIST THE CRIPPLED TRAIN:

Rules and regulations for working trains on an obstructed line in case of obstruction or accident on the authority of block ticket (T/A-602) when communications are available shall be followed in accordance with the provisions of SR 6.02.05.

10. VISIBILITY TEST OBJECT:

The signal lights of signal No.25A/B for UP direction and Signal No.22 for down direction of Line No.1 during day and night are the visibility test object vide GR 3.61.2(b)(iii)

11. ESSENTIAL EQUIPMENT AT THE STATION:

(Details are given in Appendix-'E')

12. FOG SIGNAL MEN NOMINATED TO BE CALLED IN CASE OF FOG.**FOG SIGNALLING:-**

In case of thick, foggy or tempestuous weather impairing visibility, whenever it is necessary to indicate to the Loco pilot of an approaching train the locality of a signal, the SM on duty at station shall arrange for signaling in terms of General Rules 3.61 and Subsidiary Rules thereto. The assurance of the staff shall be obtained in the month of OCTOBER every year in the Fog Signal Register vide SR.3.61 as a token of their acknowledgement in fog signaling Rules. Fog signalmen shall be detailed for duty at stations being recruited partly from the station traffic staff and partly from Engineering Gang man and must not be substitutes or casual labour but regular employees of the railway.

12.1 STATION DETONATOR REGISTER (OPT/124)

A Register regarding detonator is maintained at the station.

12.2 INSTRUCTIONS:

This register contains the following parts.

- Part - I: Particulars of fog signal men posted at the station from time to time.
- Part – II: Particulars of receipt and stock of detonating (fog) signals at the station to be filled in whenever detonators are used or received.
- Part – III: Periods of fogs, fog signalmen on duty and details of detonators used.
- Part – IV: Particulars of issue and testing of fog signals at the station.

- b. In charge of the station shall ensure that the information maintained in the register is kept up to date and is accurate in all respects.
- c. Transportation inspectors shall check the registers and also the stock of detonators on hand each time they visit the station and initial with date as an indication having done so.

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APPENDICES

- APPENDIX-A : WORKING OF LEVEL CROSSING GATES
- APPENDIX-B : SYSTEM OF SIGNALLING AND INTERLOCKING AND COMMUNICATION ARRANGEMENTS AT THE STATION.
- APPENDIX-C : ANTI COLLISION DEVICE (RAKSHA KAVACH)
- APPENDIX-D : DUTIES OF TRAIN PASSING STAFF AND STAFF IN EACH SHIFT
- APPENDIX-E : LIST OF ESSENTIAL EQUIPMENT PROVIDED AT THE STATION
- APPENDIX-F : RULES OF WORKING OF DK STATION, HALTS, IBH, IBS AND OUTLYING SIDINGS
- APPENDIX-G : RULES FOR WOKING OF TRAINS IN ELECTRIFIED SECTIONS
- APPENDIX-H : RULES FOR WORKING OF PRIVATE SIDINGS.

CERTIFICATE:

NOTHING IN THESE RULES SHALL BE READ AS CANCELING, AMENDING OR MODIFYING ANY GENERAL RULES AND SUBSIDIARY RULES, BLOCK WORKING MANUAL AND OPERATING MANUAL. THESE RULES CANCEL ALL PREVIOUS STATION WORKING RULES.

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APPENDIX 'A'
WORKING OF LEVEL CROSSING GATES

WORKING RULES FOR "B" CLASS LEVEL CROSSING GATE SITUATED AT KM 870/17-18 FROM HOWRAH BETWEEN SIMHACHALAM NORTH AND ELS BLOCK HUT OF WALTAIR MARSHALLING YARD AND PASSING ACROSS E.CO. RAILWAY, DESPATCH LINE AND KK LINE.

1. GENERAL:**1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

- | | |
|--|---|
| 1. Number of Level Crossing Gate : | <u>SS-1</u> |
| 2. Engineering or Traffic Gate : | <u>Engineering</u> |
| 3. Under control of Station Master / SSE (P.Way): | <u>SSE/P.WAY.</u> |
| 4. Location at KM: | <u>870/17-18</u> |
| 5. At Station: | <u>SCMN YARD</u> |
| 6. In between stations : | <u>Towards south end of SCMN.</u> |
| 7. BG / MG / NG : | <u>BG</u> |
| 8. Single line / Double line / Multiple line: | <u>Multiple Line</u> |
| 9. Normal Position: <u>Open to road Traffic</u> | |
| 10. Interlocked / Non-Interlocked: | <u>Inter locked with Station signals.</u> |
| 11. Means of Interlocking | <u>HKT/Key Transmission</u> |
| 12. Provision of Gate signal at Kms. | |
| (i) Up Line : <u>Nil</u> | |
| (ii) Dn Line : <u>Nil.</u> | |
| 13. Signalling arrangements: | <u>MACLS</u> |
| 14. Means of Communication – Telephone / Bell etc.: | <u>Telephone connection with
SCMN RRI Cabin</u> |
| 15. Width of level crossing gate: | <u>9.5 M.</u> |
| 16. Type of road (NH / SH / Others) : | <u>Others.</u> |
| 17. Name of Road : | <u>Municipal Road.</u> |
| 18. Metaled / non-metaled : | <u>Metaled.</u> |
| 19. Approach road : | <u>Metaled.</u> |
| 20. Width of the road : | <u>9.5 M</u> |
| 21. Angle of road crossing (in case of the skew gates): | <u>45 Degree.</u> |
| 22. Road gradient (if any) | |
| (i) North / East side : | <u>1 in 30</u> |
| (ii) South / West side: | <u>1 in 40.</u> |
| 23. Road alignment (straight/curve) | |
| (i) North / East side : | <u>Straight.</u> |
| (ii) South / West side: | <u>Straight</u> |
| 24. Provision of height gauges: | <u>Provided</u> |
| 25. Type of Barriers : | <u>Coupled Lifting type.</u> |
| 26. Length of Check rails : | <u>11.50 M</u> |
| 27. Road surface in between L-Xing gates: | <u>Level.</u> |
| 28. Length of Rumble strip / speed breakers: | <u>20 M from gate post.</u> |
| 29. Road signs: | <u>Provided</u> |
| 30. Speed breaker indication board: | <u>Provided</u> |
| 31. TVU: | <u>20698 on 2010.</u> |
| 32. Census next due on : | <u>2013</u> |
| 33. Demarcation for placement of Detonators: | <u>Provided</u> |
| 34. No. of Gatemen working: | <u>3 Three</u> |
| 35. Nearest Railway Medical Assistance Railway Hospital: | <u>Marripalem</u> |

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36. Nearest Private Medical Assistance available (if any):

Private clinic at
Gopalapatnam

37. List of equipment available Yes / No:

Yes

1.2 **EQUIPMENT:**

	<u>Items</u>	<u>Quantity / Numbers</u>
1.	Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8..	Gate lamps	2
9..	Tommy Bar	1
11.	Mortar Pan	1
10.	Spade / Fowrah	1
11.	Rammer	1 (In case of asphalted road this may not be provided)
12.	Pick Axe	1 (In case of asphalted road this may not be provided)
13.	Tin case for flags	1
14.	Can for oil	1
15.	Water port / Bucket	1
16.	Canister for Muster Roll	1
17.	Set of spare spectacles of gateman wearing glasses	1
18.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
19.	Basket	1
20.	Whistle	1
21	Wall Clock	1
22.	Small chain for locking arrangement.	1
24.	Pad locks	5

1.3 **RECORDS TO BE KEPT AT GATE LODGE:**

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.

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11. Inspection Book.
12. S&T Register in case of Interlocked Engineering Gate.

1.4 **MODE OF OPERATION:**

Gate is normally be kept open to road traffic. Whenever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

1.4.1 **Brief Description**

This is a "B" Class interlocked level crossing gate situated within the station limits of Simhachalam North. The gate is controlled by RRI panel button No 166 and provided with coupled lifting type barriers operated with winch from the gate lodge. The gate crosses E.Co.Railway., Despatch line and KK single line.

1.4.2 **INTERLOCKING:-**

The gate is interlocked with Home Signal Nos.78/78C and 80/80C and Last stop signal No.69 of Simhachalam North RRI. The Interlocking is achieved through Electrical transmission of gate key to the RRI Cabin.

OPERATION OF GATE-

- i) Key "H" extracted from the winch after closing gate shall be inserted In 1 GF and shall reversed whereby Key "Q" is released which locks the gate in closed condition.
- ii) Key "Q" is transmitted to RRI through RKT.
- iii) Panel Station Master at RRI operates gate control button No. 166 in conjunction with "GSB" (Group Release Button) where by "Green" light appears on the panel.
- iv) Then Panel Station Master takes off the signals concerned.

The position of the gate is indicated on the panel above the button No.166 by a "Yellow" light when the gate is closed, and by a " Red" light when the gate is opened for road traffic The " Red" light on the panel with its switch 166 in normal position shall hold (signals cannot be taken "Off") all Down despatch signals and UP reception signals on KK line and Down reception signals on S.E.Rly. Despatch line in their normal position.

1.4.3 **NORMAL WORKING:-**

The gate shall normally to be kept open for road traffic during day and night and will be closed as and when required for passage of trains. Whenever it is required to be closed against road traffic the Station Master on duty at RRI Cabin shall advise the gateman on duty to close the gate and transmit the key. The gateman will clear road traffic, close the gate by operating the winch and and operate the locking as explained in para 1.5 above.

After the passage of the train the gateman shall inform the Station Master that the train has passed safe with last vehicle indication. The Station Master after normalising the concerned signal switches shall operate the button No.166 to open the gate and advise the gateman to extract the key "Q" from RKT at the gate. "RED" indication lamp appears on the panel immediately the key is extracted by gateman. Thereafter the gateman shall open the gate for road traffic.

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When the level crossing gate is opened for road traffic, the gateman on duty in order to show "DANGER HAND SIGNAL" to an approaching train shall at night keep his "HAND SIGNAL LAMP" turned to show "RED" and in day keep the "RED" hand signal flag furled in his hand throughout the period when the level crossing gate is opened to the road traffic in terms of SR 6.03.07.

1.4.4 EMERGENCY OPERATION:-

No Emergency Keys are provided at the gate for Emergency operation of LC Gate.

In the event of failure of RKT and the gate could not be operated, the Station Master shall immediately intimate failure to the ESM/MSM/SE (Signals) for rectification. Till such time the failure is rectified by ESM/MSM/SE(Signals), the gate shall be treated as non-interlocked and all trains passing over the gate shall be piloted "IN" or "OUT". The Station Master on duty shall ensure from the gateman that the gate is closed against road traffic and take an assurance Private Number from the gateman in token of closing the gate before sending pilot memo for piloting the train. However the TPM who pilot the train shall, while going to pilot, physically verify the closing and locking of the gate. In the event of failure of barriers, the gate man shall close the level crossing gate, close with chains and pad lock and shall then confirm the Station Master at RRI supported by Private Number, in both the above cases, TPM who pilots, while going, shall verify closing and locking of level crossing gate.

1.4.5 FAILURE OF COMMUNICATION:-

In case of failure of Telephonic communication between the gateman and the Station Master on duty RRI Cabin shall send manuscript message in duplicate to the gateman on duty advising him to close the gate and transmit the key . On receiving the advise the gateman shall close the gate and acknowledge the same and return one copy to the Station Master on duty. The gateman shall immediately transmit the key to the Station Master on duty through RKT. The gateman on duty should be elert watchful and responsible for the safe passage of trains.

1.5 DUTIES OF GATEMAN:

1. ALERTNESS:

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. ROUTING DUTIES OF GATEMAN:

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

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- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also prepared to repeat any signal which guard may give to drive on walkie-talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gangmate or SSE/P.Way any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the loco pilot to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.

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- xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:**

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the loco pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If loco pilot / guard fails to take notice, gateman shall immediately inform the Station Master, If connected on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master on telephone, to take appropriate action, under exchange of private number.

5. **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty over telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

- a) **On double line section:**
 - i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.

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- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

b)

On single line section:

- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
- ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
- iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
- v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
- vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.

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viii) Thereafter, he shall stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.

c)

Other action to be taken by Gateman:

i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.

ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.

iii) He shall note down the particulars of the road vehicle, vehicle number, name of the loco pilot, owner and relay these details to the nearest Station Master or SSE/P.Way regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6

ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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- 1.7 **SPECIAL INSTRUCTIONS FOR DIFFERENT TYPES OF LEVEL CROSSINGS:**
Instructions for different types of manned Level Crossing Gates are given in Annexures as follows:
- i) Annexure – I Engineering Level Crossing Gate, Interlocked with gate signals, provided with telephone, with normal position 'Open to road traffic'.
 - ii) Annexure – II Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Open to road traffic'.
 - iii) Annexure – III Traffic Level Crossing Gate, Interlocked with stop signals of the station, provided with telephone, with normal position 'Closed to road traffic'.
 - iv) Annexure – IV Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Open to road traffic'.
 - v) Annexure – V Engineering Level Crossing Gate, non-interlocked, provided with telephone, with normal position 'Closed to road traffic'.
 - vi) Annexure – VI Engineering Level Crossing Gate, non-interlocked, not provided with telephone, with normal position 'Closed to road traffic'.

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ANNEXURE – I**WORKING INSTRUCTIONS FOR “B” CLASS LEVEL CROSSING GATE SITUATED AT KM 870/17-18 FROM HOWRAH BETWEEN SIMHACHALAM NORTH AND ELS BLOCK HUT OF WALTAIR MARSHALLING YARD AND PASSING ACROSS E.CO. RAILWAY, DESPATCH LINE AND KK LINE.****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate..

i]. Key 'H' extracted from the winch after closing the gate is inserted in 1 GF normal, releases 1 GF.

ii]. 1 GF when reversed releases key 'Q'. and locks gate in closed position.

iii]. Key 'Q' extracted from 1 GF is transmitted electrically through EKT to SS/SM/RR1. SS/SM operates the gate control button 166 in conjunction with group release button. Gate closed indication Green light appears on the panel. When signal is taken 'OFF' locked indication RED light also appears in the panel.

iv]. To open the gate after passage of train SS/SM operates gate control button 166 in conjunction with group release button on the panel. The gate man releases key 'Q' from EKT and WHITE light appears on the panel immediately.

2. Intimation to the gateman

i) Immediately after departure of the train, SS/SM shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.

ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatch station.

iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.

iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

i) If the telephone falls at the gate connected with the station at the despatching end, Station Master shall issue a caution order to the loco pilot of the departing train.

ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.

iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.

iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the despatching end, under exchange of private number that the telephone at the gate has failed.

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- v) The SS/SM at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through trackman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

4. Failure of Lifting Barriers or Leaf Gates:

- i) When the gate cannot be closed due to failure of lifting barriers gates, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers or leaf gates do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the loco pilot before despatching a train in the block section.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repairs the lifting barrier and issue reconnection / fit memo for the same.

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

NO Emergency Key is available in this LC gate.

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.

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- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer (No emergency Key is provided in this LC gate)

7. Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:

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- a) If gate signals can be taken 'OFF' without closing the gate, or
 - b) The key can be extracted from the operation winch when the gate is in open condition, or
 - c) The key can be extracted from the gates when the gate is in open condition
- ii) If the Gate or the Gate Signal or Warner / Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
 - iii) The gateman will immediately advise the SS/SM on duty, under exchange of private number, regarding defective gate signals.
 - iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
 - v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
 - vi) SS/SM on duty will issue a caution order to the loco pilot of a departing train.
 - vii) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before despatching a train in the block section from his end.
 - viii) Station Master shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
 - ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.

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- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SS/SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the SS/SM at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to loco pilot of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staffs rectify the defective lifting barriers and issue reconnection / fit memo for the same.

9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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Appendix 'A'**WORKING RULES OF "B" CLASS INTERLOCKED LEVEL CROSSING GATE SITUATED AT KM 870/11-12 FROM HOWRAH PASSING ACROSS VSP LINE AND BY-PASS LINE LYING BETWEEN SIMHACHALAM NORTH-GOPALPATNAM E.I AND SIMHACHALAM NORTH- VADLAPUDI RRI CABIN: .****1. GENERAL:****1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:**

Following details shall be maintained at all manned level crossing gates:

- | | |
|--|---|
| 1. Number of Level Crossing Gate : | <u>SP-1.</u> |
| 2. Engineering or Traffic Gate: | <u>Engineering</u> |
| 3. Under control of Station Master / SSE/P.Way | <u>SSE/P.WAY</u> |
| 4. Location at KM : | <u>870/11-12</u> |
| 5. At Station: | <u>SCMN</u> |
| 6. In between stations : | <u>Towards South end of SCMN</u> |
| 7. BG / MG / NG : | <u>BG</u> |
| 8. Single line / Double line / Multiple line : | <u>Twin single Line</u> |
| 9. Normal Position: | <u>Open to road Traffic</u> |
| 10. Interlocked / Non-Interlocked : | <u>Inter locked with Station signals.</u> |
| 11. Means of Interlocking: | <u>HKT</u> |
| 12. Provision of Gate signal at Kms. | |
| (i) Up Line : <u>Nil</u> | |
| (ii) Dn Line : <u>Nil.</u> | |
| 13. Signalling arrangements: | <u>MACLS</u> |
| 14. Means of Communication – Telephone / Bell etc.: | <u>Telephone connection with SCMN RRI Cabin of SCMN</u> |
| 15. Width of level crossing gate : | <u>8.5 M.</u> |
| 16. Type of road (NH / SH / Others) : | <u>Others</u> |
| 17. Name of Road: | <u>Municipal.</u> |
| 18. Metaled / non-metaled : | <u>Metalled</u> |
| 19. Approach road : | <u>Metalled</u> |
| 20. Width of the road : | <u>8.5M.</u> |
| 21. Angle of road crossing (in case of the skew gates): | <u>90 degree</u> |
| 22. Road gradient (if any) | |
| (i) North / East side : | <u>1 in 40</u> |
| (ii) South / West side : | <u>1 in 30</u> |
| 23. Road alignment (straight/curve) | |
| (i) North / East side: | <u>Straight.</u> |
| (ii) South / West side: | <u>Straight.</u> |
| 24. Provision of height gauges : | <u>Provided</u> |
| 25. Type of Barriers : | <u>Coupled Lifting type.</u> |
| 26. Length of Check rails: | <u>10.5 M..</u> |
| 27. Road surface in between L-Xing gates: | <u>Level</u> |
| 28. Length of Rumble strip / speed breakers: | <u>20 M from gate post</u> |
| 29. Road signs : | <u>Provided</u> |
| 30. Speed breaker indication board: | <u>Provided</u> |
| 31. TVU : | <u>29823 on 2010.</u> |
| 32. Census next due on : | <u>2013.</u> |
| 33. Demarcation for placement of Detonators: | <u>Provided</u> |
| 34. No. of Gatemen working: | <u>3 Three</u> |
| 35. Nearest Railway Medical Assistance: | <u>Railway Hospital Marrisalem</u> |
| 36. Nearest Private Medical Assistance available (if any): | <u>Private clinic at Vepagunta</u> |
| 37. List of equipment available Yes / No : | <u>Yes</u> |

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1.2 EQUIPMENT:

	<u>Items</u>	<u>Quantity / Numbers</u>
1.	Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
.		
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade / Fowrah	1
12.	Rammer	1 (In case of asphalted road this may not be provided)
13.	Pick Axe	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water port / Bucket	1
17.	Canister for Muster Roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Wall Clock	1
23.	Small chain for locking arrangements.	2
.		
24.	Pad lock.	5

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.
11. Inspection Book.
12. S&T Register in case of Interlocked Engineering Gate.

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1.4 MODE OF OPERATION:

Gate shall normally be kept open to road traffic. Whenever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/dispatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

1.4.1 BRIEF DESCRIPTION:-

This is a " B" Class level crossing gate situated within station section at KN 870/9-10 interlocked with station signal at KM 870/9-10 from Howrah. The level crossing covers across VSP lines (1 & 2) between stations Simhachalam North and Jaggayyapalem SSI cabin and Bye-pass line between Simhachalam and Gopalapatnam E.I.Cabin.

1.4.2 INTERLOCKING

The gate is interlocked with reception and Despatch signals of Bye-Pass line and VSP line 1 & 2 The interlocking is achieved through electrical transmission of gate key to the RRI panel.

1.4.3 OPERATION OF GATE-

- i) Key "H" extracted from the winch after closing gate shall be inserted In 1 GF and shall reversed whereby Key "Q" is released which locks the gate in closed condition.
- ii) Key "Q" is transmitted to RRI through RKT.
- iii) Panel Station Master at RRI operates gate control button No. 166 in conjunction with "GSB" (Group Release Button) where by "Green" light appears on the panel.
- iv) Then Panel Station Master takes off the signals concerned.

1.4.4 NORMAL WORKING:-

The gate shall normally be kept opened for road traffic during day and night and will be closed as and when required for passage of trains. Whenever it is required to be closed against road traffic the Station Master on duty at RRI Cabin shall advise the gateman on duty.

The gateman will clear road traffic and close the gate by operating the winch and operate the winch as explained in para No. 2.5 above.

After passage of the train "the gateman shall inform the Station Master that the train has passed safely with the last vehicle indication.

The Station Master after normalising the concerned signals presses the button No.165 and advise the gateman to takeout the key "P" from the RKT at the gate and open the gate. When the key is extracted from the RKT at gate lodge by gateman "RED" indication lamp appear on the panel at switch.No.165 indicating the extraction of key by gateman. Thereafter the gateman shall open the gate.

When the level crossing gate *is* opened for road traffic, the gateman on duty in order to show "DANGER SIGNAL" to an approaching train must at night keep his "HAND SIGNAL LAMP" turned to show "RED" and in day "RED" Hand Signal Flag furled in his hand throughout the period when the level crossing gate is opened to road traffic in terms of SR 16.03.07.

1.4.5 EMERGENCY OPERATION:-

No Emergency Key is provided in this LC gate.

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In the event of failure of RKT and the gate could not be operated, the Station Master shall immediately intimate failure to the ESM/MSM/SE(Signals) for rectification. Till such time the failure is rectified by ESM/MSM/SE(Signals), the gate shall be treated as non-interlocked and all trains passing over the gate shall be piloted "IN" or "OUT".

The Station Master on duty shall ensure from the gateman that the gate is closed against road traffic and take an assurance Private Number from the gateman in token of closing the gate before sending pilot memo for piloting the train- However, the TPM who pilots the train shall, while going to pilot, physically verify the closer and locking of the gate. In the event of failure of barriers the gate man shall close the level crossing with chains and pad lock and shall then confirm the Station Master at RR1 supported by Private Number.

In the both above cases TPM who pilots while going, shall verify closing and locking of the gate.

1.4.6 **FAILURE OF COMMUNICATION:-**

In case of failure of Telephonic communication between the gateman and the RRI Cabin, the Station Master on duty shall send manuscript message in duplicate to the gateman on duty advising him to close the gate and transmit the key . On receiving the advise the gateman shall close the gate and acknowledge the same on one copy and return the other to the Station Master on duty. The gateman shall immediately transmit the key to the Station Master on duty through RKT. The gateman on duty should be alert watchful and responsible for the safe passage of trains.

After the fault is rectified by S&T staff, the Station Master on duty shall obtain a written memo from them and record the transactions.

1.5 **DUTIES OF GATEMAN:**

1. **ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. **POSITION DURING PASSAGE OF TRAINS:**

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

3. **ROUTING DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.

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- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also prepared to repeat any signal which guard may give to drive on walkie-talkie or in any other way.
- vii) If lifting barriers get damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest Station Master, Gang mate or SSE/P.Way any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the loco pilot to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.
- xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.

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- xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:**

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the loco pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If loco pilot / guard fails to take notice, gateman shall immediately inform the Station Master on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master on telephone, to take appropriate action, under exchange of private number.

5. **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the Station Master on duty over telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the Station Master after two or three attempts, he shall first protect the gate and then inform on phone.

The gateman shall protect the line as under:-

- a) **On double line section:**
 - i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.

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- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
- b) **On single line section:**
- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.

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- vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - viii) Thereafter, he shall warn the loco pilot and stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- c) **Other action to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the loco pilot, owner and relay these details to the nearest Station Master or SSE/P.Way regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6 ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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ANNEXURE – I**WORKING INSTRUCTIONS OF "B" CLASS INTERLOCKED LEVEL CROSSING GATE SITUATED AT KM 870/11-12 FROM HOWRAH PASSING ACROSS VSP LINE AND BY-PASS LINE LYING BETWEEN SIMHACHALAM NORTH-GOPALAPATNAM RRI CABIN AND SIMHACHALAM NORTH. VADLAPUDI RRI CABIN:****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate

- i]. Key 'G' extracted from the winch after closing the gate is inserted in 1 GF normal, releases 1 GF.
- ii]. 1 GF when reversed releases key 'P'. And locks gate in closed position.
- iii]. Key 'P' extracted from 1 GF is transmitted electrically through EKT to SS/SM/RRI. SS/SM operates the gate control button 165 in conjunction with group release button. Gate closed indication Green light appears on the panel. When signal is taken 'OFF' locked indication RED light also appears in the panel.
- iv]. To open the gate after passage of train SS/SM operates gate control button 165 in conjunction with group release button on the panel. The gate man releases key 'P' from EKT and WHITE light appears on the panel immediately. releases 1 GF.

2. Intimation to the gateman

- i) Immediately after departure of the train, SS/SM shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman as soon as he receives train entering section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) If the telephone falls at the gate connected with the station at the despatching end, SS/SM shall issue a caution order to the loco pilot of the departing train.
- ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.

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- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number that the telephone at the gate has failed.
- v) The SS/SM at the dispatching end shall then issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through Trackman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

4. Failure of Lifting Barriers or Leaf Gates:

- i) When the gate cannot be closed due to failure of lifting barriers or leaf gates, the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the loco pilot before despatching a train in the block section.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staffs repair the lifting barrier and issue reconnection / fit memo for the same.

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

No Emergency Key is provided in this LC gate.

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.

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- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. **Failure of the Gate Key with the gate in open condition:**

No Emergency key is provided in this LC.gate.

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. **Defective Gate Signals:**

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:

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- a) If gate signals can be taken 'OFF' without closing the gate, or
 - b) The key can be extracted from the operation winch when the gate is in open condition, or
 - c) The key can be extracted from the leaf gates when the gate is in open condition
- ii) If the Gate or the Gate Signal or Warner / Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
 - iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
 - iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
 - v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
 - vi) SS/SM on duty will issue a caution order to the Loco pilot of a departing train.
 - vii) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before despatching a train in the block section from his end.
 - viii) SS/SM shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
 - ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.

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- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the Station Master who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers / leaf gates are not fouling the track.
- viii) The SS/SM shall also inform the Station Master at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the Station Master accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to Loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers / leaf gates and issue reconnection / fit memo for the same.

9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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APPENDIX 'A'
WORKING OF LEVEL CROSSING GATES

**WORKING RULES FOR "B" CLASS MID-SECTION LEVEL CROSSING GATE
SITUATED AT KM: 864/17 BETWEEN SIMHACHALAM NORTH AND PENDURTI.**

1. GENERAL:

1.1 DESCRIPTION OF THE LEVEL CROSSING GATE:

Following details shall be maintained at all manned level crossing gates:

- | | | |
|-----|---|---|
| 1. | Number of Level Crossing Gate : | <u>490</u> |
| 2. | Engineering or Traffic Gate: | <u>Engineering</u> |
| 3. | Under control of Station Master / SSE/P.Way: | <u>SSE/P.WAY</u> |
| 4. | Location at KM: | <u>864/33A – 865/1A</u> |
| 5. | At Station : | <u>NIL</u> |
| 6. | In between stations: | <u>SCMN & PDT</u> |
| 7. | BG / MG / NG: | <u>BG</u> |
| 8. | Single line / Double line / Multiple line: | <u>Multiple Line</u> |
| 9. | Normal Position : | <u>Open to road Traffic</u> |
| 10. | Interlocked / Non-Interlocked: | <u>Inter locked</u> |
| 11. | Means of Interlocking: | <u>Inter locked with gate signals</u> |
| 12. | Provision of Gate signal at Kms. | |
| | (i) Up Line : | <u>Up Main line gate signal between Km 864/27A-29A</u>
<u>Up KK gate signal between km 865/3-4</u> |
| | (ii) Dn Line : | <u>Dn Main line gate signal between km 865/6A-8A</u>
<u>Dn KK gate signal between km864/14-15.</u>
<u>Provided with UP & DN gate signals.</u> |
| | (iii) Middle Line: | <u>Provided with UP & DN gate signals.</u> |
| 13. | Signalling arrangements : | <u>Gate Signals.</u> |
| 14. | Means of Communication – Telephone / Bell etc: | <u>Telephone connection with</u>
<u>SCMN RRI Cabin of SCMN</u> |
| 15. | Width of level crossing gate : | <u>6.80 M</u> |
| 16. | Type of road (NH / SH / Others) : | <u>Others</u> |
| 17. | Name of Road : | <u>Municipal Raod</u> |
| 18. | Metaled / non-metaled : | <u>Metaled</u> |
| 19. | Approach road: | <u>Metaled</u> |
| 20. | Width of the road : | <u>6.80M</u> |
| 21. | Angle of road crossing (in case of the skew gates): | <u>90 degree</u> |
| 22. | Road gradient (if any): | |
| | (i) North / East side: | <u>1 in 30.</u> |
| | (ii) South / West side : | <u>1 in 20</u> |
| 23. | Road alignment (straight/curve) | |
| | (i) North / East side : | <u>Straight</u> |
| | (ii) South / West side: | <u>Straight</u> |
| 24. | Provision of height gauges : | <u>Provided.</u> |
| 25. | Type of Barriers: | <u>Coupled Lifting type</u> |
| 26. | Length of Check rails : | <u>8.80 M</u> |
| 27. | Road surface in between L-Xing gates: | <u>Level</u> |
| 28. | Length of Rumble strip / speed breakers : | <u>20 M from gate post.</u> |
| 29. | Road signs: | <u>Provided</u> |
| 30. | Speed breaker indication board: | <u>Provided</u> |
| 31. | TVU : | <u>3775 on 2008</u> |
| 32. | Census next due on : | <u>2011</u> |
| 33. | Demarcation for placement of Detonators: | <u>Provided</u> |
| 34. | No. of Gatemen working: | <u>3 [Three]</u> |
| 35. | Nearest Railway Medical Assistance: | <u>Railway Hospital Marrisalem</u> |

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36. Nearest Private Medical Assistance available (if any): Private clinic at Gopalapatnam, PDT, Vepugunta
37. List of equipment available Yes / No: Yes

1.2 EQUIPMENT:

	<u>Items</u>	<u>Quantity / Numbers</u>
1.	Hand Signal Lamp Tri Colour	3 (5 on Quadruple / Line or twin single line)
2.	Hand Signal Flag Green	1 Mounted on stocks
3.	Hand Signal Flag Red	3 (6 on Quadruple / line or Twin single line and 7 in case Hexaple Section mounted on sticks)
4.	Banner Flag Red	3 (5 on Quadruple / Line or twin single line)
5.	Posts for exhibiting red banner flag	2 (4 on Q / Twin single line and 5 on Hexaple section)
6.	Spare chains with padlocks	2 with stop mark
7.	Detonators	10 in tin case
8.	Gate lamps	2
9.	Tommy Bar	1
10.	Mortar Pan	1
11.	Spade / Fowrah	1
12.	Rammer	1 (In case of asphalted road this may not be provided)
13.	Pick Axe	1 (In case of asphalted road this may not be provided)
14.	Tin case for flags	1
15.	Can for oil	1
16.	Water port / Bucket	1
17.	Canister for Muster Roll	1
18.	Set of spare spectacles of gateman wearing glasses	1
19.	Board demarcating protection of level crossing gate diagram in case of obstruction on gate	1
20.	Basket	1
21.	Whistle	1
22.	Small chain for locking arrangements	1
23.	Wall Clock	2
24.	Pad locks	5

1.3 RECORDS TO BE KEPT AT GATE LODGE:

In addition to the above equipment, following records shall also be kept at the gate lodge.

1. Gate Working Instructions in Hindi / English.
2. Gate Working Instructions in local vernacular language.
3. Gateman Rule Book in local vernacular language
4. List for tools and books.
5. Duty Roster.
6. Certificate for working as gateman.
7. Bio-data particulars of Gatemen, including date of passing vision test, initial / refresher course, safety camp etc.
8. Accident Register.
9. Record of last census of road traffic at level crossing gate.
10. Public Complaint Book.

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11. Inspection Book.
12. S&T Register in case of Interlocked Engineering Gate.

1.4 **MODE OF OPERATION:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate.

1.4.1 **Brief Description**

This is an "A" Class interlocked level crossing gate located at KM 864/17 between SCMN and Pendurti across the Down, Up, Middle and KK line. The gate is provided with coupled lifting barriers operated with winch from gate lodge.

1.4.2 **INTERLOCKING**

The gate is provided with Manually operated Multi Aspect Colour Light signals with necessary "G" marker. A push button on the panel is provided for operation of signals. The signals are interlocked with the gate through this panel.

DESCRIPTION OF SWITCHES:-

Switch No.	Functions.
1S	Switch for UP gate signal No. 1 S of Up Main line.
3 S	Switch for UP gate signal No. 3 S of Middle line.
5 S	Switch for Dn gate stop signal No. 5 S of KK line.
2 S	Switch for Up gate stop signal No. 2 S of KK line.
4 S	Switch for Dn gate stop signal No. 4 S of Dn Main line.
6 S	Switch for Dn gate stop signal No.6 S of Middle line.

1.4.3 **OPERATION OF GATE SIGNALS:-**

- i) Gate shall be closed by operating winch
- ii) Key "G" extracted from the winch (in gate closed condition) shall release 1 GF.
- iii) 1 GF in reverse position shall boom lock the gate barriers and release Key "GI".
- iv) Key "GI" inserted in RKT and turned which gives Key "IN" contact of RKT along with the reversal of switches S1 or S2 or S3 or S4 shall clear the signal Nos. 1S or 2S or 3S or 4S respectively,

Miniature signal indications are provided in the Gate Lodge to indicate the aspect of signals.

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1.4.4 NORMAL WORKING:-

The gate shall normally be kept open to road traffic during day and night and will be closed for passage of trains as and when required. Whenever it is required to be closed against road traffic, the Station Master on duty at Simhachalam North RRI Cabin shall advise the gateman on duty the expected time of departure of train with train number and direction and route on which it is approaching, supported by Private Number. He shall then acknowledge the same to Station Master on duty supported by a Private Number as an assurance that the gate shall be closed and locked in time, and shall take off the signals after clearance of road traffic if any by operating the gate as explained in para No. 3.8. After the passage the train the gateman shall put back the signals to normal position and open the gate for road traffic.

1.4.5 FAILURE OF COMMUNICATIONS:-

In case of telephonic communication failure between the gateman and the Station Master on duty at Simhachalam North RRI Cabin, the gateman on duty should be alert, watchful and responsible for the safe passage of the train as it approaches the signal under such circumstances Station Master on duty at RRI Cabin shall inform Station Master on duty at Pendurti about the failure of communications and both shall issue caution orders to trains proceeding into section.

1.4.6 FAILURE OF INTERLOCKING:

In case the interlocking of gate/gate signal becoming defective the gateman on duty shall pass the trains over the level crossing by showing proceed hand signal provided the gate is closed and locked against road traffic in terms of GR 16.06. in event of failure of gate barriers, gate shall be closed with chains and pad locked and then shall pass the train by showing the proceed hand signal in terms of SR 16.06.04. The

gateman shall inform the Station Master on duty regarding the failure of gate. On receiving the information of gate failure the Station Master on duty shall Immediately inform the concerned ESM/MSM/ SSE (Signals) /SE(Signals) and SSE(P-Way)/SE(P-Way) for immediate rectification and on rectification shall obtain a written memo.

1.5 DUTIES OF GATEMAN:**1. ALERTNESS:**

The gateman shall be alert and be prepared to take immediate action, should danger be apprehended. Keys of the gate shall be in his personal custody.

2. POSITION DURING PASSAGE OF TRAINS:

During passage of trains, gateman will stand in the manner indicated below:

- i) Gateman will stand alternatively in front of the gate-lodge facing the approaching train.
- ii) In day time, gateman shall hold red and green flags furled up on separate sticks in right and left hands respectively.
- iii) In night time, gateman shall hold lighted hand signal lamp with white light facing the track.
- iv) He shall keep the whistle slung around his neck from a cord.

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3. **ROUTING DUTIES OF GATEMAN:**

- i) Gateman shall ensure that red banner flag is placed across the track whenever the gate is kept in open condition for passage of road vehicles.
- ii) Gateman shall ensure that gate lamps and lamps of all gate signals are lighted and kept burning continuously from sunset to sunrise.
- iii) Gateman shall perform his duties strictly according to the duty roster and shall not leave the gate unless reliever arrives and takes charge of it. However, it is necessary to leave the gate in an emergency, he must close and lock the gates against road traffic, before leaving the gate.
- iv) Except where otherwise prescribed under Special Instructions, he shall observe all passing trains and be prepared to take such action as may be necessary to ensure safety of trains.
- v) Gateman shall watch all passing trains and keep sharp look out for any unusual like hot axle, hanging chains, hanging battery, and vehicle / wagons / train / battery box on fire, shifted load, falling material like brake blocks, brake beams, safety bracket, vacuum cylinder or any other situation endangering safe running of trains.
- vi) Gateman shall also prepared to repeat any signal which guard may give to loco pilot on walkie-talkie or in any other way.
- vii) If lifting barriers gate damaged or becomes out of order, the gateman shall use the spare chain with disc and padlocks for securing the gate against road traffic.
- viii) Gateman shall report to the nearest SS/SM, Gangmate or SSE/P.Way any defect in his gate or apparatus pertaining to it, as soon as possible.
- ix) In the event of gate signal becoming defective the gateman shall maintain the signal in the 'ON' position even by disconnecting the signal or the wire if necessary.
- x) At the gate whose signal have become defective, the gateman shall close and lock the lifting barriers on sighting a train and hand signal or pilot the train past the defective signal. In such case he should inform the loco pilot to report the defect at the next station.
- xi) Gateman shall wear badge and prescribed uniform while on duty at level crossing gate.
- xii) Gateman shall ensure that he is having competency certificate in his possession while on duty.
- xiii) Gateman shall work the gate as per Gate Working Instructions and remain well conversant with these instructions.
- xiv) Gateman shall ensure that equipment supplied at the gate is in good order and ready for immediate use.
- xv) Gateman shall see that the channel for the flange of the wheel is kept clear.

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- xvi) Gateman shall keep the road surface well watered and rammed in case of unmetalled roads.
- xvii) Gateman must be vigilant to see that inconvenience to road users due to closure of gates should be to the minimum possible extent.
- xviii) Gateman on electrified section shall watch that road vehicles / animals passing from gate are within the height loading gauge provided on either side of the level crossing gate.
- xix) Gateman shall prevent tress passing by persons or cattle to the maximum extent.

4. **ACTION IN CASE OF UNUSUAL OCCURANCE ON TRAIN:**

In case gateman observes any thing unusual with a passing train, he shall take following action:

- i) He shall take prompt action to warn the loco pilot / guard of the passing train by showing red flag by day and red light by night.
- ii) He shall simultaneously try to draw the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating, throwing ballast on the brake van or by any other means.
- iii) If loco pilot / guard fails to take notice, gateman shall immediately inform the Station Master on telephone, to take appropriate action, under exchange of private number.
- iv) In case of train parting, gateman shall not show stop hand signal but shall show prescribed signal for train parting.
- v) He shall endeavour to attract the attention of the loco pilot / guard by whistling continuously, shouting, gesticulating and by raising both hands vertically above, quickly parting them and bringing them together in repeated Up and Down motion as high and as low as possible.
- vi) In case the train does not stop, gateman shall immediately inform the Station Master on telephone, to take appropriate action, under exchange of private number.

5. **ACTION IN AN EMERGENCY AT THE LEVEL CROSSING:**

- i) In case of an obstruction at the level crossing gate, gateman shall maintain the gate signals, if any, in the 'ON' position.
- ii) Thereafter, if he is unable to remove the obstruction, gateman shall immediately advise the SS/SM on duty by telephone, regarding the defects / obstructions at the gate, under exchange of private number.
- iii) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.

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The gateman shall protect the line as under:-

- a) **On double line section:**
- i) If both lines are obstructed the Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the line on which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night on the other line 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.
 - iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night on the line on which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed on the other line, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - viii) Thereafter stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- b) **On single line section:**
- i) Gateman shall plant a red banner flag by day and a red light by night 5 meters away on posts duly provided for the purpose. He shall first protect the direction from which a train is expected to arrive first.
 - ii) Then he will similarly plant the other red banner flag by day and red light by night towards the other direction 5 meters away from the site of obstruction.
 - iii) Gateman shall then proceed to protect the gate along with detonators and red flag by day and red hand signal lamp by night.

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- iv) Gateman shall proceed exhibiting red flag by day and red hand signal lamp by night towards the direction from which a train is expected to arrive first, to a point 600 meters on BG and place one detonator on the line. Thereafter he shall proceed to a distance 1200 meters on BG from the level crossing gate and place 3 detonators on the track 10 meters apart. Having thus protected the line he shall return to the level crossing gate picking up the intermediate detonator on his way back.
 - v) Thereafter, he shall proceed towards the other direction, showing red hand signal, similarly place detonators as described in para (iv) above and return to the site of obstruction, picking up the intermediate detonator on his way back.
 - vi) Having returned to the gate, he must then take steps to remove the obstruction and warn the loco pilot of the approaching train.
 - vii) In case the gateman observes or hears a train approaching when he is still on his way to protect and before he reaches the stipulated distance to place detonators, he shall place detonators on the line at a distance as far away as he can go.
 - viii) Thereafter stop the approaching train by waving his red flag by day red hand signal lamp by night repeatedly.
- c) **Other action to be taken by Gateman:**
- i) At night Gateman shall light two hand signal lamps and take action to exhibit red light and protect the lines as described in sub paras (a) and (b) above.
 - ii) If the gate is broken by a road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall take immediate action.
 - iii) He shall note down the particulars of the road vehicle, vehicle number, name of the loco pilot, owner and relay these details to the nearest Station Master or SSE/P.Way regarding the particulars and obstructions at the level crossing gate, through messenger or through means available.

1.6

ENGINEERING ITEMS:

Please see para 916, 918, 919 of IRPWM for visibility requirements at level crossings, provision of speed breakers on the approaching roads of level crossings and census of traffic at level crossings.

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ANNEXURE – I**WORKING ISTRUCTIONS FOR "B" CLASS MID-SECTION LEVEL CROSSING GATE SITUATED AT KM: 864/17 BETWEEN SIMHACHAIAM NORTH AND PENDURTI.****1. Mode of Operation:**

Gate shall normally be kept open to road traffic. When ever it is required to close the gate SS/SM on duty shall inform the gate man on duty about the direction and description of the train intended to receive/despatch. Gate man on duty shall ensure clearance of road traffic close and lock the gate

- i]. Key 'G' extracted from the winch after closing the gate is inserted in 1 GFI, releases 1 GF.
- ii]. 1 GF when reversed effects boom locking and releases key 'G1'. and locks gate in closed position.
- iii]. Key 'G1' extracted from 1 GF after boom locking, is to be inserted in RKT and turned.
- iv]. Key in contact of RKT along with the reversal of switches will clear signal No. 1S, 3S, 5S, 2S, 4S, 6S respectively.

2. Intimation to the gateman

- i) Immediately after departure of the train, SM/SS shall advise the gateman through telephone connected at his end, the number, description, direction and expected time of passage of the train at the gate.
- ii) If the telephone is connected to the station at the receiving end, this advice shall be given by the SS/SM to the gateman, as soon as he receives train entering section advice from the dispatching station.
- iii) If the actual running time of the train from either end of the section is less than 10 minutes, SS/SM will convey this advice to the gateman before obtaining / granting line clear.
- iv) It should be the duty of the gateman to ensure that the gate is closed in time, so that there is no detention to the train or excessive detention to road traffic.

3. Failure of Telephonic Communication:

When Telephonic Communication fails or it does not get any response from the Gateman despite 2 or 3 attempts, the following procedure should be adopted:

- i) If the telephone falls at the gate connected with the station at the despatching end, SS/SM shall issue a caution order to the Loco pilot of the departing train.
- ii) SS/SM shall advise the loco pilot to whistle continuously and proceed cautiously while approaching the gate.
- iii) In case the gate signal is 'ON' he should stop short of the gate signal and follow the procedure laid down under GR 3.73.
- iv) In case of an approaching train, the SS/SM shall advise the SS/SM at the dispatching end, under exchange of private number, that the telephone at the gate has failed.

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- v) The SS/SM at the dispatching end shall then issue a caution order to the Loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM will also advise the gateman through Trackman / Patrolman / Loco pilot of the first train that the telephone has become defective.
- vii) SS/SM should also advise S&T staff responsible for maintenance of the telephone to rectify the same at the earliest.
- viii) Normal working will be resumed only after S&T staff rectify the telephone and issue reconnection / fit memo for the same.

4. Failure of Lifting Barriers or Leaf Gates:

- i) When the gate cannot be closed due to failure of lifting barriers the gateman shall immediately inform the SS/SM on duty under exchange of private number, and ensure that lifting of barriers do not foul the track.
- ii) He shall immediately fix red banner flag by day and red light by night on the post at that end first from which the train is approaching and then at the other end.
- iii) Gateman shall secure that gate against road traffic by means of safety chains and padlocks.
- iv) After securing the gate against road traffic, gateman shall show green hand signal flag by day and green light to the Loco pilot of the approaching train.
- v) SS/SM on duty shall issue caution order to the Loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number; to similarly issue a caution order to the Loco pilot before despatching a train in the block section.
- vii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barrier / leaf gates to rectify the same at the earliest.
- viii) Normal working will be resumed only after maintenance staff repair the lifting barrier and issue reconnection / fit memo for the same.

5. Failure of Gate Key with the gate in closed position, when Gate Key cannot be extracted for opening the gate:

No Emergency Key is provided in this gate.

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone, under exchange of private number.
- ii) If Emergency Key is available at the gate lodge / cabin, Gateman will take it out from the sealed box by breaking the seal and open the gate for road traffic.
- iii) The record of the date and time of breaking the sealed cover of Emergency key Box shall be recorded and signed with reasons.

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- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- v) SS/SM on duty shall issue caution order to the loco pilot of a departing train.
- vi) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a train in the block section from his end.
- vii) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- viii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- ix) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

6. Failure of the Gate Key with the gate in open condition:

- No emergency Key is provided in this gate.-

- i) If the gate key cannot be extracted from the winch, gate signal lever or key transmitter then gateman must immediately inform the SS/SM on duty on telephone.
- ii) Thereafter, the gate must be treated as non-interlocked and procedure for reception / despatch of trains as prescribed for non-interlocked gates, should be adopted.
- iii) The gateman shall secure the gate against road traffic by means of chains and padlocks and pass trains on hand signals.
- iv) SS/SM on duty shall issue a caution order to the loco pilot of a departing train.
- v) He shall also advise the SS/SM at the despatching end, under exchange of private number, to similarly issue a caution order to the loco pilot before dispatching a train in the block section from his end.
- vi) SS/SM shall advise S&T staff responsible for maintaining the key transmitter to repair the same at the earliest.
- vii) Normal working will be resumed only after S&T staff repair the key transmitter and issue reconnection / fit memo for the same.
- viii) After rectification, the Emergency key shall be replaced in the Emergency Key Box and resealed by the S&T maintainer.

7. Defective Gate Signals:

- i) The gateman shall treat the gate as defective and must not lower them under following circumstances:
 - a) If gate signals can be taken 'OFF' without closing the gate, or

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- b) The key can be extracted from the operation winch when the gate is in open condition, or
- c) The key can be extracted from the leaf gates when the gate is in open condition
- ii) If the Gate or the Gate Signal or Warner / Distant Signal becomes defective in 'OFF' position, the gateman will make all efforts to put it at 'ON' position even by cutting signal wires, if necessary.
- iii) The gateman will immediately advise the Station Master on duty, under exchange of private number, regarding defective gate signals.
- iv) Thereafter, the gate must be treated as non-interlocked and procedure for reception / dispatch as prescribed for non-interlocked gates should be adopted.
- v) He shall show green hand signal flag by day and green light by night to the passing train after closing the gate.
- vi) SS/SM on duty will issue a caution order to the loco pilot of a departing train.
- vii) He shall also advise the SS/SM at the dispatching end, under exchange of private number, to similarly issue a caution order to the Loco pilot before despatching a train in the block section from his end.
- viii) SS/SM shall advise S&T staff responsible for maintaining the gate signal to repair the same at the earliest.
- ix) Normal working will be resumed only after S&T staff rectify the defective gate signal and issue reconnection / fit memo for the same,

8. Obstruction at the Gate:

- i) If the gate is broken by road vehicle which is fouling the track, or if lifting barriers or any other part of the gate foul the track, or if there is any other obstruction at the gate, the gateman shall immediately put back gate signals to 'ON' position.
- ii) He shall fix red banner flag by day and red lamp by night on posts provided at both ends of the gate for this purpose.
- iii) Immediately after this, the gateman shall advise the SS/SM on duty regarding the defects / obstructions at the gate, under exchange of private number.
- iv) If there is no response from the SS/SM after two or three attempts, he shall first protect the gate and then inform on phone.
- v) Gateman shall then rush with detonators and red flag by day and red hand signal lamp by night in the direction of the approaching train and protect the gate as stipulated in General Instruction for duties of gateman under item no. 1.5(5).
- vi) Thereafter he shall protect the gate from the other direction also.

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- vii) He shall note down the particulars of the road vehicle, name of the driver, owner and relay these details to the SS/SM who shall not start the train unless he has been assured by the gateman that the road vehicle or the lifting barriers are not fouling the track.
- viii) The Station Master shall also inform the SS/SM at the despatching end, under exchange of private number, asking him not to despatch any train in the block section from his end, until the track has been cleared of all obstruction.
- ix) After the track has been cleared of all obstructions the gateman shall inform the SS/SM accordingly, under exchange of private number.
- x) SS/SM shall then issue a caution order to loco pilots of all trains to proceed cautiously, and pass the gate signal at 'ON' position on green hand signal of the gateman, if the gate is broken, but is clear of any obstruction.
- xi) Gateman shall secure the gate against road traffic by means of safety chains and padlocks, and there after exhibit green hand signal, if the gate is not obstructed.
- xii) SS/SM shall advise maintenance staff responsible for maintaining the lifting barriers to repair the same at the earliest.
- xiii) Normal working will be resumed only after maintenance staff rectify the defective lifting barriers and issue reconnection / fit memo for the same.

9. Obstruction on the Track near Level Crossing Gate:

If there is a rail fracture or obstruction on the track due to falling of a tree, fouling by road vehicle or derailment which is visible to the gateman, the gateman and Station Master will adopt the procedure given under item No.8 above. If the obstruction fouls the Level Crossing Gate, gateman must keep the gates closed against road traffic till the track is cleared of the obstruction.

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APPENDIX-‘B’ OF STATION WORKING RULES OF
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APPENDIX-'B'

**APPENDIX "B" TO STATION WORKING RULES OF SIMHACHALAM NORTH
STATION.DETAILS OF SIGNALING AND INTERLOCKING FOR WORKING THEM
NORMALLY AND IN EMERGENCY ETC INCLUDING THE POWER SUPPLY
ARRANGEMENTS.**

- 1.1 The power signaling and interlocking installations is as per the signaling plan No.SI-23090 Alt." A" together with control tables, route section plans and wiring diagrams.

Based on the above signaling plan the Station Working Rules diagram attached to the Station Working Rule shows the following.

The complete layout of the Station including the non-interlocked lines and sidings within the station limits. In addition to signaling features the diagram indicates gradients, holding capacity of all individual lines, the position and number of lines, over run lines, special restrictions, track circuits, ground frames, cabins, goomties aspect control of signals and inter yard telecommunication facilities including paging and talk back equipment.

- 1.2 In this installation where the points are power operated, the point remaining in the last operating position. If the position of the points required to be changed, it shall be resorted individually by operating the concerned point button [WN] in conjunction with Point Group Button(WWN) to required position.
- 1.3 Charts are given in the Appendix-" B" showing the operation of entrance and exit buttons for various routes governed by stop signals, calling on signals and shunt signals, slots and the designation of various signals etc, for the convenience of the operation of points & signals by the SM on duty.
- 1.4 The Station is of Standard III interlocked equipped with Manually Operated Multi Aspect Colour Light Signals and power operated points with track circuit control over points and berthing tracks etc. centrally controlled from Route Relay Cabin through Siemens Type Route Relay installation based on the principles of entrance and exit to conform to signaling and interlocking plan No.SI-10664 Alt-"D".
- 1.5 Route Relay Cabin is controlling the movements of trains from/to Pendurthi, GPT, (including By-Pass double line) WMY ,(RYD,S.E Despatch and KK), and JGPM.

2.0 SIEMENS DOMINO PANELS - OPERATING AND INDICATING FOR OPERATION OF THE POWER SIGNALING:-

Two panels viz. operating (control) panel and indication panel are installed in the RRI Cabin Simhachalam North.

OPERATING (CONTROL) PANEL:-

The operating (control) panel is a small console, provided with various operating push buttons for signals, points, individual route section release, emergency operations and other miscellaneous buttons on a small layout of the entire yard in accordance with the geographical position at site. Special illuminated indicator indicating power failures is provided on this panel.

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All the controlling push buttons are provided with indications and designation, number showing the corresponding number of the signal or route or points or any other field units as per the signaling and interlocking plan. The panel Station Master while operating the controlling buttons, switches, counters etc., on the operating panel for controlling the traffic movements or any other operation connected with power signaling installations in the yard should at the same time monitor the conditions of the traffic movements, condition of lines, position of the Block Instruments and condition of all other units on the indication panels.

2.2 INDICATION PANEL:

The indication panel shows in a domino form interlocked portion of Simhachalam North complete yard with connections to the ancillary yards together with the geographical co-relation the tracks, points, signals and various other controls as existing at site. This panel through various illuminating indications provided for the field functions, indicates the condition of a particular field gear at a given time in a miniature form so that the entire traffic operation in the yard as well as the position of power signaling and interlocking installations may be constantly monitored by the panel Station Master. Each track circuited line on the indication panel is represented by a separate and distinct colour on the face of the panel and is illuminated indicating the conditions of route setting, route releases, track clearance and occupancy of the track etc. Non-track circuited lines are shown in black colour for maintaining visual contact but they are not illuminated.

2.3 POSITIONING OF CONTROLLING BUTTONS ON THE OPERATING PANEL

The field function controlling buttons of points, signals, routes, slots etc., are located close to the position where the field function are represented on the operation panel. The common buttons such as emergency cancellation button, common point buttons and various counters (meant for counting emergency operations), signal power supply control buttons, signal and point intensity control buttons, are all housed on the top of the panel. In order to avoid the difficulty of the operator in reaching two buttons "for any operation". some common buttons are multiplied on the operation panel at convenient places.

2.4 CRANK HANDLE RELEASE PUSH BUTTON:

To release any Crank Handle, concerned Crank Handle control button & Crank Handle group release button [CHRB] is to be pressed simultaneously. Then the steady White light near the Crank Handle button starts flashing till such time the control released accepted by the field agency. At site Red indication appears when the Key is extracted from Key lever unit a flashing Red indication will appear on the Panel and White light extinguishes after the completing the work when the key is inserted and turned in the Key lock unit the flashing Red light become steady and the White light starts flashing. After seeking the indication SM/Panel Operated with draw the control by operating the concerned CH button in conjunction with group Crank Handle Normal Button [CHNB].

2.5 LAMP MUTING PUSH BUTTON:

Whenever any signal lamp is fused, a flashing indication appears on the panel in the concerned signal aspect with a buzzer. To stop the buzzer this button is to be operated.

- a) A white indication is provided on the panel to indicate closing of the level crossing gate
- b) The level crossing key is electrically interlocked with the panel. When key is extracted from the winch after closing the level crossing when inserted in the RKT the "key in contact" appears on the panel, which release the concerned signals.
- c) The track circuits are indicated on the panel with "WHITE" light for clear and "RED" light for occupation.

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- d) Point indicators (white light) are provided for "Reverse" and "Normal" position of the points. A point failure indication is also provided with Flashing light.
- e) In case of failure of Motor operated points, the procedure detailed in rule No. 20.06 of Operating Manual, should be followed for setting of the points by Crank Handle.

2.6 SIGNALS AND THEIR INDICATIONS:-

- a) Manually operated multiple aspect colour light signals are provided at this RRI installation. The indications of various aspects of signals provided in this yard are as follows:-

i) **-Red-**

Red indicates "Danger" aspect and signifies stop dead till the signal is taken off.

ii) **Single Yellow :**

Single Yellow indicates "Caution" aspect and signifies proceed cautiously preparing to stop dead at the next stop signal.

iii) **Double Yellow :**

Double Yellow indicates "Attention" aspect and signifies proceed prepared to pass the next signal at a restricted speed.

iv) **Green:**

Green indicates "Clear" aspect and signifies "Proceed".

b) **Route Indicators:**

It takes the form of a row of a lunar white lights above the signals at junction points at various degrees from the vertical to the left or right as the case may be to indicate whether the turn out at the junction point is set to the right or to the left side of the loco pilot. In case of more than one such arm of route indicator on the same side, the top most reads to the first loop and the others for subsequent loops in regular order of sequence from the Main line.

3.0 a) LIST OF COUNTERS WITH THEIR CODE AND FUNCTION:-

Any emergency operations such as full route release, sub-route release, emergency overlap release, emergency point operation etc., are registered in respective counters which are fixed on the top of the panel adjacent to the concerned emergency operation button. The following counters are provided.

Sl. No	Description	Code	Remarks
1.	Emergency full-route release counter.	EUUYZ	The three button cancellation of any route which set is registered in this counter.
2.	Emergency sub-route release counter.	EUYZ	Individual sub-route release in case of failure is registered in this counter.
3.	Emergency overlap release counter	OYZ	Emergency release of any over lap in case of failure is registered in this counter.
4.	Emergency point operation counter.	EWZ	Emergency operation of points under track circuit failure operation is registered in this counter.

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5.	Calling on signal counter.	COGGZ	Whenever a calling on signal is cleared the, operation is registered in this counter.
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b) **LIST OF OPERATING BUTTONS WITH THEIR CODE AND COLOUR:**

The operating buttons are distinctly coloured for easy identification. The following is the list of the important buttons with their designations in codes and colours:

Sl. No	Description	Code	Colour	Remarks
1.	Main signal button.	S.1 GN	Red	No.1 indicate signal number.
2.	Shunt signal button.	Sh.3 GN	Yellow	3 Indicates shunt signal number
3.	Route button.	34 OUN	Grey	34 O indicates track circuit number.
4.	Buttons for panel intensity control	Ind. Lamp 1,2,3.	White	Three such buttons are provided-
5.	Points button without route section emergency release facility.	179 WN	Blue	No. 179 indicates the point number.
6.	Points button with route section (emergency) release facility.	151 WN	Blue with a White dot.	151 indicates the number of points.
7.	Emergency full route release button (group).	EJUYN	Grey	Duplicated for easy access.
8.	Emergency route section release button (individual).	EUYN	Grey	Duplicated for easy access
9.	Common push button for points.	WWN	Blue	Duplicated for easy access
10.	Point emergency push button.	EWN	Blue	Duplicated for easy access
11.	Button for silencing buzzer for signal:	GXYN	White	
12.	Button for silencing buzzer for points	WXYZ	White	
13.	Emergency group button for putting back a signal to 'ON' position.	EGGN	Red	Duplicated for easy access.
14.	Calling on signal group button.	COGGN	Greasy	For taking off a calling on signal this button is pressed along with the concerned signal button.
15.	Slot button (individual)	Stot-88	Green	No. 88 indicates the slot number
16.	Group slot button.	GSB	Green	For giving/canceling slot to ground frames/cabins etc. this has to be pressed along with individual slot buttons.
17.	Group slot cancellation button.	GSRB	Green	Buttons are Duplicates for easy access.
18.	Emergency overlap release button.	OYN	Grey	Duplicated for easy access.
19.	Crank handle group button (individual).	CH4	Blue	CH 4 indicates crank handle No.4.

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20.	Group crank handle release button.	CHRB	Blue	Duplicated for easy reach. These buttons are pressed along with the individual crank handle group button for releasing the crank handle and subsequent normalization.
21	Group crank handle normal button	CHNB	Blue	
22	Siding point control button.	C166	Green	C166 means control 166. This button is to be pressed along with GSB/GSRB.
23	Level crossing control button	LX-4	Green	No.4 indicates the control No. This button is to be pressed along with GSB/GSRB.
24	Power failure alarm suppression button	XYN	White	Button to be pressed to mute alarm bell due to power failure
25	Last vehicle verification key release button.	LVVYN	Grey	This button is to be pressed along with GSB/GSRB in case of manual verification of last vehicle indicator during failure of Axle counter.

The sequences/of button operations to be made for different operations on the panel is as under:

Srl No	Operation	Button used	Sequence of operation
1	To clear a calling on signal	GN & UN EGGN COGN	First initiate the stop signal route by pressing GN & UN simultaneously, then press GN and EGGRN to throw back the stop signal to "ON" [whether it is cleared or not] and then press GN & COGN simultaneously, release COGN keeping GN pressed and press UN.
2	To clear a main signal	GN&UN	Press both buttons simultaneously.
3	To clear shunt signal	Sh.GN & UN	Press both buttons simultaneously.
4	To throw cleared signal to danger whether a stop Signal or a calling on signs or a shunt signal.	GN&EGGN	Press the concerned GN and EGGRN simultaneously.
5	To cancel a route already set after replacing the cleared signal °ON"[whether it is a stop signal or calling on signal or a shunt signal]	GN, EUUYN &UN	Press the GN & EUUYN simultaneously, release EUUYN keeping GN pressed and press UN. This is known as three button cancellation.

NOTE: When the signal is approach locked or dead approach locked on pressing GN & EUUYN. a flashing dot indication below the concerned signal configuration appears. Wait till it becomes steady and then press GN & EUUYN, release EUUYN keeping GN pressed and press UN.

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Srl No	Operation	Button used	Sequence of operation
6	To release individual rout section under emergency.	WN & EUYN	The key under the custody of SSE/Sig, SE/Sig/RRI to be inserted and turned to "ON" position. Then WN and EUYN buttons are to be pressed simultaneously for emergency sub-route release.
7	Individual operation of points, tracks are clear.	WN & WWN	Press the point's button concerned and common points button together.
8	Individual operation of points, when points tracks fail.	WN & EWN	Break open the seal of EWN key box. insert & turn the key and press both the buttons simultaneously. This operation by panel Station Master is registered in the EWN Counter.
9	To release a locked over lap in case of failure.	UN & OYN	The key under custody of the SSE/Sig. SE/Sig./RRI is to inserted and turned to "ON" position. Then "UN" and "OYN" buttons to be pressed simultaneously for emergency overlap release.
10	To Change the position of points after arrival of train.	WN WWN	Concerned Point Button [WN] and Group Point Button [WWN] to be pressed.

4.0 SPECIAL AND IMPORTANT NOTES:-

- a) It is essential that only two push buttons concerned are pressed positively with deliberation and the buttons should be kept pressed for three to eight seconds.[as necessary]
- b) In order to avoid failure of any operation, when the two buttons concerned are pressed it is essential that no other button is pressed.
- c) Whenever bi-directional movements are permitted over a berthing track, two buttons viz., one route button for movements in Down direction and one for UP direction are provided.
- d) The locking on the points giving flank protection cannot be released by cancellation of the individual route section with in which these points are located but by release of the individual route section which had commanded such flank protection/isolation.

In the power signaling installations, generally the complete route of a stop signal comprises of the route between the concerned signal and signal ahead and also the adequate distance [signal over lap]. The complete route of shunt signal or a calling on signal comprises of the route between the subject signal and signal ahead.

Normally the portion of the track between two consecutive stop signals or between two consecutive shunt signals or between a shunt signal and the stop signal ahead termed as full-route is made up of several individual route sections each route section controlling the various field elements like track circuits, points, level crossing gates, flank protection etc., not only in its immediate jurisdiction but also within its ambit of control. The signal over lap locking/setting is released in an emergency operation through the berthing track control.

Normally each route section is designated after the most pre-eminent number of the points that fall within the immediate jurisdiction of the individual route section, so the numbers of the point button and individual route section are the same. Therefore the common point button coloured blue with a white dot on the top [along with the concerned group push button] should be operated either for individual operation of the points in the route section or for the release of individual route section in case of failures etc., under special emergency provisions.

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In some cases, however, where there are more than one set of points or cross-overs in a particular individual route section, the route section is designated generally after the number of the pre-eminent set of points or cross-overs in that part of the route section zone.

In all such cases the individual operation of the points and the release of the individual route section occur/with the operation of the common button [which is coloured blue with white dots]. The operation of all other individual points or cross-overs in that route section zone is dependent on the individual operation of the concerned point button which are coloured blue without any white dot] together with the group button provided such an operation is only possible when the controlling route section is not engaged. This is applicable in the following cases:-

Point buttons **without** white dot.

1. 108 Section/Sections being free
2. 112 Section/Sections being free
3. 129 Section/Sections being free
4. 122 Section/Sections being free

In addition to the provision of the buttons on the operating panel for initiating a route setting and taking off a signal certain other illuminated white or coloured light indications and buttons as below are provided on the operation and indication panels to enable the Panel Station Master to constantly watch the condition or state of various fields gears and to control the traffic movements in a direct and expeditious manner :-

5.0 Indications:-

These indications exhibited on the indication panel to indicate the condition or state of controls at any given line of field gears, ground frames, goomties, siding controls and shunting free indicator controls. These controls released by the Panel Station Master for controlling:-

- i) Rotary Key Transmission unit for siding operations.
- ii) Crank Handle Transmission control for emergency motor point crank handle control keys are clubbed into one group and the following are the indications exhibited on the operation panel.
 - a) A white study light indication the normally of the control Panel i.e.. Crank Handle not released.
 - b) Whenever a control is released from the RRI cabin to the field agencies, a flashing white light will appear till such time the said control release is accepted by the concerned field agencies and as the control is accepted at the field site a flashing Red light appears.
 - c) A steady Red light and a White flashing appears when the field work is completed and controls returned by the field agencies.
 - d) After the Panel Station Master withdraws his control or release by operating the appropriate buttons a White steady light appears again.

6.0 CUSTODY OF RELAY ROOM KEY AND PROCEDURE FOR ITS HANDING OVER AND TAKING OVER BETWEEN STATION MASTER AND S&T MAINTENANCE STAFF:

The Cabin RRI relay room is provided with Double locking arrangement. One key is kept with the station Master on duty and one with Signal Maintainer. Whenever required the key with SM shall be given to the maintainer for attending failure / maintenance under clear signature with date time & purpose, record properly in the

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relay room key register maintained at the cabin on completion of the work the SM's key shall be returned by the S&T maintainer recording the, Date & Time under clear signature of the maintainer & SM on duty. The procedure given at Appendix 'B' and OM 1.14 shall be followed.

6.1 ELECTRIC POWER SUPPLY INDICATIONS.

Power signaling and interlocking installations and the satellite ancillary field units are fed from the following sources of power supply.

- i) Normal supply from APSEB supply 3 Phase 400V- 50HZ.
- ii) Stand-by supply-I from 25 KV Traction supply through Auxiliary Transformers - single phase 220V-50HZ.

iii) Stand by supply- II Diesel Generator power supply-3 phase 400V-50HZ.
The availability of the normal power supply is indicated by a stencil indicator "M1" on the operating panel when the normal supply fails, the traction supply is automatically switched on and stencil indicator "M2 " appears.

In the event of failure of power supply from both the above sources the Cabin Station Master on duty should immediately advise his staff to start the D/Generator provided in the D/Generator Room in the RRI compound. After the D/Generator is started the Station Master on duty should put "ON" the Main Switch provided in the Panel Room. Then the D/Generator supply will be extended to panel. The indication "M3" lits on the panel. When the normal power supply or standby power supply is restored the same will be switched over automatically. Whenever power is switched to standby supply a buzzer/indication appears. This should be acknowledged by the panel operator by pressing the Acknowledgement button and then put off the main switch and stop the D/Generator. The Station Master should intimate the Traction Power Controller and the Section Controller to arrange for early repairs.

7.0 INTENSITY OF PANEL LIGHT INDICATORS:-

These indicators provided at Operating Panel along side the panel illumination intensity control button 1, 2, & 3, show the accordance of the illumination brightness of the panel lights with the controlling buttons Nos.1,2, & 3. Only one button can be operated at a time.

8.0 TRACK INDICATORS:-

Each track circuit is given a separate and distinguishable colour on the face of the indication panel and entire length of the track circuited portion of the track provided with recti-liner transparent filters and illuminated from behind to indicate the conditions of track circuited lines at any given movement [whether engaged and route set or occupied]. When once a route is set by pressing the entrance and exit buttons for signalled route. For the purpose of giving indications to the Panel Station Master about the occupancy of any or all of the track circuited section/sections, the route is split into four portions and the details of the four portions are as follows:-

- i) Approach track either in rear of the first stop signal or any other stop signal in the station yard.
- ii) Entry portion of a route from the subject signal upto the fouling mark of the berthing track.
- iii) The berthing track and
- iv) The over lap [where provided].

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The approach track of a stop signal other than the first stop signal] is normally lit WHITE when a route is set for a train movement leading to the above stop signal and this white strip of indication of the track (throughout the route section and berthing tracks en-route) change to RED one after the other progressively in the direction of the train movement as*the train passes and finally the RED light extinguishes when the vehicle or train clears these various portions of the track circuits on the route.

In the second part of the route whenever a train is occupying the track circuited section i.e., at the entrance end at the track circuit indication shows RED light [changing from WHITE to RED] and as soon as a train or vehicle has cleared this portion of the route section/track circuited portion of the line, the RED light extinguishes on this portion of the track. This sequence of operation of track indications signify the sectional route release for facilitating subsequent traffic movements.

In the third part of the route, whenever a train is on the berthing track, it continues to show the RED light [changing from white to red] till berthing track is cleared of this train or vehicle.

In the fourth part of the route the over lap will continue to show WHITE light for period of 120 seconds after the berthing track is occupied by the train and when these lights extinguish, it shows the release of the over lap control [because by the time a train would have either come to a stop at the stop signal protecting the over lap or has passed past it]. The over lap WHITE light indication originally showing WHITE light at the time of route setting will change to RED if the over lap portion of the track circuit is occupied by the train.

In all the four parts of complete route the failure or occupation of any track circuit is indicated by a RED light.

9.0 POINT ENGAGED INDICATION:

At the apex of points, a small circular dot indicator is provided on the panel on the track portion itself. This indicator lights up whenever the point is locked in a particular position indicating that it is engaged. [Constituting either a part of the route section or an over lap set].

10.0 POINT INDICATION:

At each point the Normal and Reverse indications of point positions are shown by a small strip light on the straight for the normal setting and on the cross over portion i.e diagonally for the Reverse setting.

11.0 APPROACH TRAIN INDICATION:

At the approach of Simhachalam North yard approach track indications are provided which shall show RED lights as soon as the train occupies the track in rear of the Home Signals from respective directions.

12.0 APPROACH LOCKING INDICATIONS:

Approach locking indications are provided at all signals on the indication panel [other than those signals which have no points or level crossing gates etc- on their routes]

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The expression Approach locking connotes that the locking is effective on a signal route when once the concerned signal is taken off and the train has come within a pre-determined distance from that signal. For signals which do not have approach track circuit in rear, dead approach locking connotes that the locking is effective on the signal when once the signal is taken off.

In case it is necessary to cancel a signal that was once taken off three button emergency operation cancellation should be resorted to. Whenever there is no train on the approach track the three button cancellation should be operated straight-away and at once. This: operation is counted on the Veeder Counter.

But when there is a train on the approach track or if the signal is approach locked the approach locked indication [shown with a WHITE DOT light] flashes the moment the signal is put back to "ON" position and the cancellation is indicated. Then the route can be cancelled with the three button operations. This operation is also counted on Veeder Counter.

12.1 BLOCK RELEASE INDICATIONS:

There are three indications [White] provided on the operating panel:

- [a] Down Block release GPT-SCMN.
- [b] Down Block release Block Hut-SCMN.
- [c] UP Block release PDT-SCMN.
- [d] Down Block release GPT-SCMN (By pass DN line)

Whenever Down train clears Block section GPT-SCMN,GPT-SCMN(By Pass DN line)/Block Hut-SCMN , UP Train clears Block section PDT-SCMN and arrives at SCMN a White light lits at Down Block release section GPT-SCMN,GPT-SCMN (By Pass line)/Block Hut-SCMN/Up Block release section PDT-SCMN which indicates that the Block section is clear.

12.2 BUTTON STUCK UP INDICATION:

When any of the Signal Buttons/Point Buttons or Route Buttons [GNCR, UNCR, WNCR] is remains in the pressed position for more than] 5 seconds, the Panel becomes inoperative and White light appears on the Panel with, a audible indication [Buzzer].

If Signal Button [GN] remains in pressed a White light appears near GNCR or if a point Button [WN] remains in pressed position a White light appears near UNCR. The visible audible indication will continue till such time the fault is rectified.

13.0 AUDIBLE INDICATIONS ON OPERATING PANEL

a) SIGNAL FAILURE BUZZER:

Whenever a signal becomes blank due to fusing of RED lamp the signal failure buzzer/sounds and continues till the buzzer muting button viz., XYN [S] on the panel is pressed for acknowledging the failure. A stencil "G" indication also appears and continues till the lamp is replaced.

b) POINT FAILURE BUZZER:

In case of failure of a point this buzzer/sounds and continue till the buzzer muting button viz., WXYN is pressed for acknowledging the failure. A stencil "W" indication also appears and continues till the defect is rectified-

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c) GROUP BUTTON BUZZER:

When one or more of the operating button/buttons remains/remains in the pressed down position for more than 15 seconds this buzzer continues to buzz until the fault is rectified and all the buttons are put at normal position, the panel remains inoperative. So, it should be ensured by Panel Station Master that no operating button is pressed for more than 15 seconds

d) POINT CHAIN GROUP BELL

In case of any failure of power operation of points through the chain group, this bell rings until it is acknowledged by pressing of the button below P/indicator. However, the flashing indicator "P" continues till the defect is rectified.

14.0 SIGNAL SYMBOLS AND THEIR INDICATION ON INDICATION PANEL

Main Signals are symbolically represented by a small rectangular box with a stem [in black painted over the indicating panel] along the track lines corresponding to their position at site with provision of exhibiting two aspects viz., a steady Red light when the signal at the site shows a red aspect and a steady Green light when the signal at the site displays any aspect/aspects other than Red.

Junction stencil indicators on the stop signals are indicated in a box at the top of the stop signal symbolically and provision for indicating a WHITE light in a slit whenever any junction/signal indicator of the signal concerned at the site lit.

In case of a shunt signal below a stop signal, the aspect of the same is shown in a hexagonal box [coloured Black] with an aperture. When the shunt signal is taken off it displays a WHITE light on a diagonal slit and no light when the signal is at "ON" position.

In case of a Calling on signal it displays a WHITE DOT light on the stem with a circular box [coloured black] and no light when the signal is at "ON" position.

14.1 SPECIAL INSTRUCTIONS REGARDING SIGNAL LAMPS:

At this station, Triple pole lamps with two filaments viz. Main and Auxiliary are provided for all Main Signals. In the triple pole lamp of Signal, if the Main filament is fused. Auxiliary filament will lit automatically. However a Buzzer will ring and an indication will appear on the indication panel when one of the Main filament of the Signal lamps controlled by SCMN RRI cabin fuses. The Station Master on duty on panel has to press the ACK [Acknowledgement] button provided on the operating panel for stopping the Buzzer. However indication will continue until the fused lamp is replaced. Twenty-eight such indicators are provided at SCMN RRI cabin for DD/KK, UP dist. Main, Homes/Routing Homes/Starters, Advance starters, D/Dist VSP Line 1&2, UP Dist. SER/GD, UP Dist. KK.

The Station Master on duty shall inform the incidence of fusing of the Signal lamp main filament at RRI cabin to S&T maintenance staff [ESM/SE [Signal]] to attend the above. Reporting the fusing of Main filament of Signal lamp should be promptly done by the Station Master on duty, so that Signal lamp is replaced by S&T staff in time before Auxiliary filament also which will otherwise result detention of trains.

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- 14.2** The Station Master on duty at 00.00 hours must also ensure that all the Signal lights are burning properly. This fact must be recorded in the diary under a separate entry and confirm to the Section controller on duty as per the instructions contained in Division Safety Circular No. 82/82, Dated. 03.05.1982.

15.0 INDICATIONS IN CASE OF FAILURE OF SIGNAL ASPECT:

In case of any off aspect lamp fuses at the site, the Green indication flashes on the corresponding signal aspect indicating on the indication panel. If the Red lamp fuses the RED indication on the corresponding signal symbol flashes.

Magnetic button collars are provided and the same should be used on the operating panel on the concerned lines/points when the same are engaged/blocked as a visual reminders in accordance with SR. 5.04.01.

16.0 FAILURE OF POWER SUPPLY INDICATIONS:

The failure of power supply to the Route Relay Installations is indicated by audio and visual indicators on the operating panel.

CHART SHOWING THE OPERATION OF THE ENTRANCE AND EXIT BUTTONS FOR CLEARING STOP SIGNAL /CALLING ON SIGNALS:

The push buttons chart for initiating Stop Signals and Calling on Signals.

Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remarks
				Signal	Route	
1.	S-1 (A)	S-I	S-9	S-I	9	
2.	S-1 (A)	S-I	S-9	S-I	9/1	
3.	S-1 (A)	S-I	S-9	S-I	9/2	
4.	C-1 (A)	C-1	S-9	S-I + EGGN S-1+COGGN		
5.	C-1 (A)	C-1	S-9	S-I + EGGN S-1+COGGN	9/1	
6.	C-1 (A)	C-1	S-9	S-I + EGGN S-1+COGGN	9/2	
7.	S-1 (B)	S-I	S-17	S-I	107 A	
8.	S-1 (B)	S-I	S-17	S-I	107 A/2	
9.	C-1 (B)	C-1	S-17	S-I + EGGN S-1+COGGN	107 A	
10.	C-1 (B)	C-1	S-17	S-I + EGGN S-1+COGGN	107 A/2	
11.	S-1 (C)	S-I	S-21	S-I	21	
12.	S-1 (C)	S-I	S-21	S-I	21/1	
13.	S-1 (C)	S-I	S-21	S-I	21/2	
14.	C-1 (C)	C-1	S-21	S-I + EGGN S-1+COGGN	21	
15.	C-1(C)	C-1	S-21	S-I + EGGN S-1+COGGN	21/1	
16.	C-1(C)	C-1	S-21	S-I+EGGN S-1+COGGN	21/2	
17.	S-3(A)	S-3	S-15	S-3	107	
18.	C3(A)	C-3	S-15	S-3 + EGGN S-3+COGGN	107	

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19.	S-3 (B)	S-3	S-17	S-3	107 A	
20.	S-3 (B)	S-3	S-17	S-3	107 A /1	
21.	S-3 (B)	S-3	S-17	S-3	107 A /2	
22.	C-3 (B)	C-3	S-17	S-3 + EGGN S-3+COGGN	107 A	
23.	C-3(B)	C-3	S-17	S-3+EGGN S3+COGGN	107 A/1	
24.	C-3 (8)	C-3	S-17	S-3 + EGGN S-3+COGGN	107 A/2	
25.	S-3 (C)	S-3	S~21	S-3	21	
26.	S-3(C)	S-3	S-21	S-3	21/1	
27.	S-3 1C)	S-3	S-21	S-3	21/2	
28.	C-3(C)	C -3	S-21	S-3 EGGN S-3+COGGN	21	
29.	C-3(C)	C-3	S-21	S-3 + EGGN S-3+COGGN	21/1	
30.	C-3(C)	C-3	S-21	S-3 + EGGN S-3+COGGN	21/2	
31.	S-4	S-4	Dn.M/H of PDT	S-4	Dn Dep.	
32.	5-6	S-4	UP KK H/S of PDT	S-6	3	
33.	S-9 (A)	S-9	S-25	S-9	L1U1	
34.	S-9 (A)	S,9	S-25	S-9	L1U2	
35.	c-9(A)	C-9	S-25	S-9 + EGGN S-9+COGGN	L1U1	
36.	C-9(A)	C-9	S-25	S-9 + EGGN S-9+COGGN	L1U2	
37.	S-9 (B)	S-9	S-27	S-9	L2U1	
38.	S-9 (B)	S-9	S-27	S-9	L2U2	
39.	C-9 (B)	C-9	S-27	S-9 + EGGN S-9+COGGN	L2U1	
40.	C-9 (B)	C-9	S-27	S-9 + EGGN S-9+COGGN	L5U2	
41.	S-9 (C)	S-9	S-29	S-9	13U1	
42.	S-9 (C)	S-9	S-29	S-9	L3U2	
43.	C-9 (C)	C-9	S-29	S-9 4 EGGN S-9+COGGN	L3U1	
44.	C-9 (C)	C-9	S-29	S-9 + EGGN S-9+COGGN	L3U2	
45.	S-9 (D)	S-9	S-15	S-9	107	
46.	C-9 (D)	C-9	S-15	S-9 + EGGN S-9+COGGN	107/J	
47.	S-9 (E)	S-9	S-17	S-9	107A	
48.	S-9 (E)	S-9	S-17	S-9	107 A/2	
49.	C-9 (E)	C-9	S-17	S-9 + EGGN S-9+COGGN	107 A	
50.	C-9 (E)	C-9	S-17	S-9 + EGGN S 9+COGGN	1 07 A/2	
51.	S-12(A)	S-12	S-14	S-12	106	
52.	C-12(A)	C-12	S-14	S-12+ EGGN S-12+ COGGN	106	
53.	S-12 (B)	S-12	S-4	S-12	4	

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54.	C-12(B)	C-12	S-4	S-12 + EGGN S- 12+COGGN	4	
55.	S-14(A)	S-14	S-6	S-14	6	
56.	C-14(A)	C-14	S-6	S- 4 + EGGN S- 4+COGGN	6	
57.	S-14(B)	S-14	S-4	S- 14	4	
58.	C-14(B)	C-14	S-4	S- 14+ EGGN S-14 +COGGN	4	
59.	S-15(A)	S-15	S-25	S- 15	L1U1	
60.	S-15 (A)	S-15	S-25	S- 15	L1U2	
61.	C-15(A)	C-15	S-25	S-15 +EGGN S- 15+COGGN	LIU1	
62.	C-15(A)	C-15	S-25	S-15 +EGGN S- 15+COGGN	L1U2	
63.	S-15 (B)	S-15	S-27	S-15	L2U1	
64.	S-15 (B)	S-15	S-27	S- 15	L2U2	
65.	C-15(B)	C-15	S-27	S-15+EGGN S- 15+COGGN	L2U1	
66.	C-15(B)	C-15	S-27	S- 15 + EGGN S- 15+COGGN	L2U2	
67.	S-15(C)	S-15	S-29	S- 15	L3U1	
68.	S-15(C)	S-15	S-29	S- 15	L3U2	
69.	C-15(C)	C-15	S-29	S- 15 + EGGN S- 15+COGGN	L3U]	
70.	C-15(C)	C-15	S-29	S- 15+&3GN S 5+COGGN	L3U2	
71.	S-15(D)	S-15	S-37	S- 15	L6U1	
72.	S-15(D)	S-15	S-37	S- 15	L6U2	
73.	C-15 (D)	C-15	S-37	S- 15 + EGGN S- 15+COGGN	L6U1	
74.	C-15 (D)	C-15	S-37	S-15+ EGGN S- 15+COGGN	L6U2	
75.	S-16(A)	S-16	S-6	S- 6	6	
76.	C-16(A)	C-16	S-6	S-16+EGGN S- 16+COGGN	6	
77.	S-16(B)	S-16	S-4	S- 16	4	
78.	C-16 (B)	C-16	S-4	S-16+ EGGN S- 16+COGGN	4	
79.	S-17 (A)	S-17	S-37	S- 17	L6U1	
80.	S-17(A)	S-17	S-37	S- 17	L6U2	

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81.	C-17(A)	C-17	S-37	S-17+ EGGN S-17+COGGN	L6U1	
82.	C-17 (A)	C-17	S-37	S-17 + EGGN S-17+COGGN	L6U2	
83.	S-17(B)	S-17	S-39	S-17	L7U	
84.	C-17(B)	C-17	S-39	S-17 + EGGN S-17+COGGN	L7U	
85.	S-17(C)	S-17	S41	S- 17	L8U1	
86.	S-17(C)	S-17	S-41	S- 17	L8U2	
87.	C-17(C)	C-17	S-41	S-17+ EGGN S-17+COGGN	L8U1	
88.	C-17(C)	C-17	S-41	S-17+ EGGN S-17+COGGN	L8U2	
89.	S-21 (A)	S-21	S-45	S-21	L 10U	
90.	C-21 (A)	C-21	S-45	S-21 + EGGN S-21+COGGN	L10U	
91.	S-21 (B)	S-21	S-47	S-21	L11U	
92.	C-21 (B)	C-21	S-47	S-21 + EGGN S-21+COGGN	L11U	
93.	S-21 (C)	S-21	S-49	S-21	L12U	
94.	C-21 (C)	C-21	S-49	S-21+ EGGN S-21+COGGN	L12U	
95.	S-21 (D)	S-21	S-51	S-21	L 13U1	
96.	S-21 (D)	S-21	S-51	S-21	L13U2	
97.	C-21 (D)	C-21	S-51	S-21 + EGGN S-21+COGGN	L13U1	
98.	C-21(D)	C-21	S-51	S-21 + EGGN S-21+COGGN	L13U2	
99.	S-25 (A)	S-25	S-61	S-25	61	
100.	C-25 (A)	C-25	S-61	S-25 + EGGN S-25+COGGN	61	
100A	S-21(A)	S-21	S-45	S-21	L10U2	
100B	C-21(A)	C-21	S-45	S-21+COGGN	L10U2	
101.	S-25 (B)	S-25	S-63	S-25	63	
102.	C-25(B)	C-25	S-63	S-25+EGGN S-25+COGGN	63	
103.	S-27 (A)	S-27	S-61	S-27	61	
104.	C-27 (A)	C-27	S-61	S-27 + EGGN S-27+COGGN	61	
105.	S-27(B)	S-27	S-63	S-27	63	

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106.	C-27(B)	C-27	S-63	S-27+EGGN S- 27+COGGN	63	
107.	S-28(1)	S-28	S-12	S-28	107 B	
108.	S-28(2)	S-28	S-12	S-28	107 B/1	
109.	C-28(1)	S-28	S-12	S-28 + EGGN S- 28+COGGN	107 B	
110.	C-28(2)	S-28	S-12	S-28 + EGGN S- 28+COGGN	107 B/1	
111.	S-29(A)	S-29	S-61	S-29	61	
112.	C-29(A)	C-29	S-61	S-29 + EGGN S- 29+COGGN	61	
113.	S-29(8)	S-29	S-63	S-29	63	
114.	C-29(B)	C-29	S«3	S-29+EGGN S- 29+COGGN	63	
115.	S-30(1)	S-30	S-12	S-30	107 B	
116.	S-30(2)	S-30	S-12	S-30	107 B/1	
117.	C-30(1)	S-30	S-12	S-30+EGGN S- 30+COGGN	107 B	
118.	C-30(2)	C-30	S-12	S-30+EGGN S- 30+COGGN	107 B/1	
119.	S-32 (A)	S-32	S-14	S-32	106	
120.	S-32(A)	C-32	S-14	S-32+EGGN S- 32+COGGN	106	
121.	S-32(B)	S-32	S-12	S-32	107B	
122.	C-32(B)	C-32	S-12	S-32+EGGN S- 32+COGGN	107B	
123.	S-34(A)	S-34	S-14	S-34	106	
124.	S-34(A)	S-34	S-14	S-34	106/1	
125.	C-34(A)	C-34	S-14	S-34 + EGGN S- 34+COGGN	106	
126.	C-34 (A)	C-34	S-14	S-34 + EGGN S- 34+COGGN	106/1	
127.	S-34(B)	S-34	S-12	S-34	107B	
128.	C-34(B)	C-34	S-12	S-34+EGGN S- 34+COGGN	107B	
129.	S-36(A)	S-36	S-14	S-36	106	
130.	S-36 (A)	S-36	S-14	S-36	106/1	
131.	C-36(A)	C-36	S-14	S-36+EGGN S- 36+COGGN	105	
132.	C-36 (A)	C-36	S-14	S-36+EGGN S- 36+COGGN	106/1	

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133.	S-36(B)	S-36	S-12	S-36	107B	
134.	C-36(B)	C-36	S-12	S-36 + EGGN S-36+COGGN	107B	
135.	S-37(1)	S-37	S-43	S-37	139	
136.	C-37(1)	C-37	S-43	S-37+COGGN	139	
137.	S-37(2)	S-37	S-43	S-37	139/1	
138.	C-37(2)	C-37	S-43	S-37+COGGN	139/1	
139.	S-38(1)	S-38	S-16	S-38	16	
140.	C-38(1)	C-38	S-16	S-38+COGGN	16	
141.	S-38(2)	S-38	S-16	S-38	16/1	
142.	C-38(2)	C-38	S-16	S-38+COGGN	16/1	
143.	S-39(1)	S-39	S-43	S-39	139	
144.	C-39(1)	C-39	S-43	S-39 + COGGN	139	
145.	S-39(2)	S-39	S-43	S-39	139/1	
146.	C-39(2)	C-39	S-43	S-39+COGGN	139/1	
147.	S-40(1)	S-40	S-16	S-40	16	
148.	C-40(1)	C-40	S-16	S-40+COGGN	16	
149.	S-40(2)	S-40	S-16	S-40	16/1	
150.	C-40(2)	C-40	S-16	S-40+COGGN	16/1	
151.	S-41(1)	S-41	S-43	S-41	139	
152.	C-41(1)	C-41	S-43	S-41+COGGN	139	
153.	S-41(2)	S-41	S-43	S-41	139/1	
154.	C41(2)	C-41	S-43	S-41+COGGN	139/1	
155.	S-42(1)	S-42	S-16	S-42	16	
156.	C-42(1)	C-42	S-16	S-42+COGGN	16	
157.	S-42(2)	S-42	S-16	S-42	16/1	
158.	C-42(2)	C-42	S-16	S-42+COGGN	16/1	
159.	S-43 (A)	S-43	S-61	S-43	61	
160.	C-43 (A)	C-43	S-61	S-43+COGGN	61	
161.	S-43 (B)	S-43	S-63	S-43	63	
162.	C-43 (B)	C-43	S-63	S-43+COGGN	63	
163.	S-43(C)	S-43	S-69	S-43	69	
164.	C-43(C)	C-43	S-69	S-43+COGGN	69	
165.	S-43 (D)	S-43	S-53	S-43	148	
166.	S-43(D)	S-43	S-53	S-43	148/1	
167.	C-43 (D)	C-43	S-53	S-43+COGGN	148	

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Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
168.	C-43 (D)	C-43	S-53	S-43+ COGGN	148/1	
169.	S-44(1)	S-44	S-16	S-44	16	
170.	C-44(1)	C-44	S-16	S-44 +COGGN	16	
171.	S-44(2)	S-44	S-16	S-44	16/1	
172.	C-44(2)	C-44	S-16	S-44+ COGGN	16/1	
173.	S-45(1)	S-45	S-53	S-45	148	
174.	C-45(1)	C-45	S-53	S-45+ COGGN	148	
175.	S-45(2)	S-45	S-53	S-45	148/1	
176.	C-45(2)	C-45	S-53	S-45+EGGN S-45+COGGN	148/1	
177.	S-47(A)	S-47	S-53	S-47	148	
178.	C-47(A)	C-47	S53	S-47+EGGN S-47+COGGN	148	
179.	S-47(B)	S47	S-73	S-47	73	
180.	C-47(B)	C-47	S-73	S-47+EGGN S-47+COGGN	73	
181.	S-47(C)	S-47	S-75	S47	75	
182.	C-47(C)	C-47	S-75	S-47+EGGN S-47+COGGN	75	
183.	S-49 (A)	S-49	S-53	S-49	148	
184.	C-49(A)	C-49	S-53	S-49+EGGN S-49+COGGN	148	
185.	S-49 (B)	S-49	S-73	S-49	73	
186.	C-49 (B)	C-49	S-73	S-49+EGGN S-49+COGGN	73	
187.	S-49(C)	S-49	S-75	S-49	75	
188.	C-49(C)	C-49	S-75	S-49+EGGN S-49+COGGN	75	
189.	S-51 (A)	S-51	S-53	S-51	148	
190.	C-51 (A)	C-51	S-53	S-51+EGGN S-51+COGGN	148	
191.	S-5) (B)	S-51	S-73	S-51	73	
192.	C-51 (B)	C-51	S-73	S-51+EGGN S-51+COGGN	73	
193.	S-51 (C)	S-51	S75	S-51	75	
194.	C-51(C)	C-51	S-75	S-51+EGGN S-51+COGGN	75	
195.	S-52(A)	S-52	S-35	S-52	L8D1	
196.	S-52 (A)	S-52	S-36	S-52	L8D2	
197.	S-52(A)	S-52	S-36	S-52	L8D3	
198.	C-52 (A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D1	

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Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
199.	C-52(A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D2	
200.	C-52 (A)	C-52	S-36	S-52+EGGN S-52+COGGN	L8D3	
201.	S-52 (B)	S-52	S-34	S-52	L7D1	
203.	S-52 (B)	S-52	S-34	S-52	L7D2	
204.	C-52 (B)	C-52	S-34	S-52+EGGN S-52+COGGN	L7D1	
205.	C-52 (B)	C-52	S-34	S-52+EGGN S-52+COGGN	L7D2	
206.	S-52(C)	S-52	S-32	S-52	L6D1	
207.	S-52 (C)	S-52	S-32	S-52	L6D2	
208.	C-52(C)	C-52	S-32	S-52+EGGN S-52+COGGN	L6D1	
209.	C-52(C)	C-52	S-32	S-52+EGGN S-52+COGGN	L6D2	
210.	S-53 (A)	S53	S-69	S-53	69	
211.	C-53 (A)	C-53	S-69	S-53+EGGN S-53+COGGN	69	
212.	S-53(B)	S-53	S-71	S-53	71	
213.	C-53 (B)	C-53	S-71	S-53+EGGN S-53+COGGN	71	
214.	S-53 (C)	S-53	S-73	S-53+EGGN S-53+COGGN	73	
215.	C-53 (X)	C-53	S-73	S-53+EGGN S-53+COGGN	73	
216.	S-53 (D)	S-53	S-75	S-53	75	
217.	C-53 (D)	C-53	S-75	S-53 + EGGN S-53 + COGGN	75	
218.	S-61	S-61	Up H/Sig of A Cabin	S-61	GRL	
219.	S-62(A)	S-62	S-S2	S-62	139	
220.	S-62 (A)	S-62	S-52	S-62	J39/J	
221.	S-62 (A)	S-62	S-52	S-62	1 39/2	
223.	C-62(A)	C-62	S-52	S-62 + EGGN S-61 + COGGN	139	
224.	C-62 (A)	C-62	S-52	S-62 + EGGN S-62 + COGGN	139/1	
225.	C-62 (A)	C-62	S-52	S-62 + EGGN S-62 + COGGN	1.39/2	
226.	S-62(B)	S-62	S-30	S-62	L.1D1	
227.	S-62 (B)	S-62	S-30	S-62	L5D2	

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				Signal	Route	
228.	C-62(B)	C-62	S-30	S-62 + EGGN S-62 + COGGN	L5D2	
229.	S-62 (C)	S-62	S-28	S-62	UD	
230.	C-62 (C)	C-62	S-28	S-62 + EGGN S-62 + COGGN	MD	
231.	S-63	.S-6.1	S-14 OF GPT	S-63	LJPJ3E P.	
232.	S-66 (A)	S-66	S-52	S-66	139	
235.	C-66 (A)	S-66	S-52	S-66	159/1	
234.	S-66 (A)	S-66	S-52	S-66	139/2	
235.	C-66 (A)	C-66	S-52	S-66 + EGGN S-66 + COGGN	139	
236.	C-66 (A)	C-C6	S-52	S-66 + EGGN S-66 + COGGN	159/1	
237.	C-66 (A)	C-66	S-52	S-66 + EGGN S-66 + COGGN	IM/2	
238.	S-66 (B)	S-66	S-30	S-66	L5D1	
239.	S-66 (B)	S-66	S-30	S-66	L5D2	
240.	C-66 (B)	C-66	S-30	S-66 + EGGN S-66 + COGGN	L5D1	
241.	C-66 (B)	C-66	S-30	S-66 + EGGN S-66 + COGGN	L5D2	
242.	S-66(C)	S-66	S-28	S-66	L4D	
243.	C-66(C)	C-66	S-28	S-66 + EGGN S-66 + COGGN	1.4D	
244.	S-68 (A)	S-68	S-52	S-68	139	
245.	S-68 (A)	S-68	S-52	S-68	139/1	
246.	S-68 (A)	S-68	S-52	S-68	1 39/2	
247.	C-68 (A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139	
248..	C-68 (A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139/1	
249.	C-68(A)	C-68	S-52	S-68 + EGGN S-68 + COGGN	139/2	
250.	S-68 (B)	S-68	S-30	S-68	L5D1	
251.	S-68 (B)	S-68	S-30	S-68	L5D2	
252.	C-68(B)	C-68	S-30	S-68 + EGGN S-68 + COGGN	L5D1	
253.	C-68(B)	C-68	S-30	S-68 + EGGN S-68 + COGGN	L5D2	
254.	S-68 (C)	S-68	S-28	S-68	L4D	

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APPENDIX-"B"

Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
255.	C-68(C)	C-68	S-28	S-68 + EGGN S-68 + COGGN	L4D	
256.	S-69	S-69	Dn H/S of MYD B/Hut	S-69	80	
257.	S-71	S-71	S-22 (GPT)	S-71	82	
258.	S-72 (A)	S-72	S-44	S-72	L1 3D1	
259.	S-72 (A)	S-72	S-44	S-72	L1 3D2	
260.	C-72 (A)	S-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D1	
261.	C-72 (A)	C-72	S-44	S-72 + EGGN S-72 + COGGN	L1 3D2	
262.	S-72 (B)	S-72	S-42	S-72	L1 2D1	
263.	S-72 (B)	S-72	S-42	S-	L1 2D2	
264.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	L1 2D1	
265.	C-72 (B)	C-72	S-42	S-72 + EGGN S-72 + COGGN	LI 2D2	
266.	S-72 (C)	S-72	S-40	S-72	L11 D	
267.	C-72 (C)	C-72	S-40	S-72 + EGGN S-72 + COGGN	L11 D	
268.	S-72 (D)	S-72	S-38	S-72	L10 D1	
269.	S-72 (D)	S-72	S-38	S-72	L10 D2	
270.	C-72 (D)	C-72	S-385	S-72 + EGGN S-72 + COGGN	L10 D1	
271.	C-72(D)	C-72	S-38	S-72 + EGGN S-72 + COGGN	L10 D2	
272.	S-72 (E)	S-72	S-52	S-72	139	
273.	S-72 (E)	S-72	S-52	S-72	139/1	
274.	S-72 (E)	S-72	S-52	S-72	139/2	
275.	C-72 (E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139	
276.	C-72 (E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139/1	
277.	C-72(E)	C-72	S-52	S-72 + EGGN S-72 + COGGN	139/2	
278.	S-72(F)	S-72	S-30	S-72	L5DI	
279.	S-72(F)	S-72	S-30	S-72	L5D2	
280.	C-72(F)	C-72	S-30	S-72 + EGGN S-72 + COGGN	L5D1	
281.	C-72 (F)	C-72	S-30	S-72 + EGGN S-72 + COGGN	L5D2	
282	S-72 (G)		S-28	S-72	L4 D	

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APPENDIX-"B"

Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
283.	C-72(G)	C-72	S-28	S-72 + EGGN S-72 + COGGN	L4 D	
284.	S-73	S-/3	up.H/sig or VDI'D L.1	S-73	84	
285.	S-75	S-75	UP.H/Sig-Of VDPD L2	S-75	86	
286.	S-78 (A)	S-78	S-72	S78	158	
287.	C-78 (A)	C-78	S-72	S-78 +EGGN S- 78+ COGGN	158	
288.	S-78 (B)	S-78	S-68	S-78	68	
289.	C-78 (B)	C-78	S-68	S-78+ EGGN S- 78+ COGGN	68	
290.	S-78 (C)	S-78	S-66	S-78	66	
291.	C-78 (C)	C-78	S-66	S-78+ EGGN S- 78+ COGGN	66	
292.	S-80 (A)	S-80	S-72	S-80	158	
293.	C-80 (A)	C-80	S-72	S-80+ EGGN S- 80+ COGGN	158	
294.	S-80 (B)	S-80	S-68	S-80	68	
295.	S-80(B)	S-80	S-68	S-80	68/1	
296.	C-80(B)	C-80	S-63	S-80+ EGGN S- 80+ COGGN	68	
297.	C-80 (B)	C-80	S-68	S-80+ EGGN S- 80+ COGGN	68/1	
298.	S-82 (1)	S-82	S-72	S-82	158	
299.	S-82 (2)	S-82	S-72	S-82	158/1	
300.	S-82 (3)	S-82	S-72	S-82	158/2	
301.	C-82 (1)	C-82	S-72	S-82 + KGGN S-82 + COGGN	158	
302.	C-82 (2)	C-82	S-72	S-82 + KGGN S-82 + COGGN	158/1	
303.	C-82 (3)	C-82	S-72	S-82 + EGCN S-82 + COGGN	158/2	
304.	S-84(A)	S-84	S-44	.S-84	L13D1	
305.	S-84(A)	S-84	S-44	S-84	L13D2	
306.	C-84 (A)	C-84	S-44	S-84 + EGGN S-84 + COGGN	L13D1	
307.	C-84(A)	C-84	S-44	S-84 + EGGN S-84 + COGGN	L13D2	
308.	S-84(B)	S-84	S-42	S-84	L12D1)	
309.	S-84 (B)	S-84	S-42	S-84	L12D2	

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APPENDIX-"B"

Srl No	Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
310.	C-84(B)	C-84	S-42	S-84 + EGGN S-84 + COGGN	L12D1	
311.	C-84(B)	C-84	S-42	S-84 + EGGN S-84 + COGGN	L12D2	
312.	S-84(C)	S-84	S-40	S-84	L11D	
313.	C-84(D)	C-84	S-40	S-84 + EGGN S-84 + COGGN	L11D	
314.	S-84 (D)	S-84	S-72	S-84	158	
315.	S-84 (D)	S-B4	S-72	S-84	158/1	
316.	S-84 (D)	S-84	S-72	S-84	158/2	
317.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158	
318.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158/1	
319.	C-84 (D)	C-84	S-72	S-84 + EGGN S-84 + COGGN	158/2	
321.	S-86 (A)	S-86	S-44	S-86	L13D2	
321.	S-86 (A)	S-86	S-44	S-86	L13D2	
322.	C-86 (A)	C-86	S-44	S-86 + EGGN S-86 + COGGN	L13D1	
323.	C-86 (A)	C-86	S-44	S-86 + EGGN S-86 + COGGN	L13D2	
324.	S-86 (B)	S-86	S-42	S-86	L12D1	
325.	S-86 (B)	S-86	S-42	S-86	L12D2	
326.	C-86 (B)	C-86	S-42	S-86 + EGGN S-86 + COGGN	L12D1	
327.	C-86 (B)	C-86	S-42	S-86 + EGGN S-86 + COGGN	L12D2	
328.	S-86 (C)	S-86	S-40	S-86	L11D	
329.	C-86 (C)	C-86	S-40	S-86 + EGGN S-86 + COGGN	L11D	
330.	S-86 (D)	S-86	S-72	S-86	158	
331.	S-86(D)	S-86	S-72	S-86	158/1	
332.	S-86 (D)	S-86	S-72	S-86	158/2	
333.	C-86 (D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158	
334.	C-86(D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158/1	
335.	C-86(D)	C-86	S-72	S-86 + EGGN S-86 + COGGN	158/2	

NOTE:

For taking off Calling -on signal after initiating the route, the main signal should be put back by operating the concern signal button and EGGN button. Press Concern signal button and COGGN button.

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THE PUSH BUTTON CHART FOR INITIATING SHUNT SIGNALS:

Srl No	Shunt Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
1.	SH-5(A)	SH-5	SH-15	SH-5	107	
2.	SH-5 (B)	SH-5	SH-17	SH-5	107A	
3.	SH-5 (C)	SH-5	SH-21	SH-5	21	
4.	SH-7 (A)	SH-7	SH-15	SH-7	107	
5.	SB-7 (B)	SH-7	SH-17	SH-7	107A	
6.	SH-7 (C)	SH-7	SH-21	SH-7	21	
7.	SH-9 (A)	SH-9	SH-25	SH-9	L1U1	
8.	SH-9 (B)	SH-9	SH-27	SH-9	L2U1	
9.	SH-9 (C)	SH-9	SH-29	SH-9	L3U1	
10.	SH-9 (D)	SH-9	SH-15	SH-9	107	
11.	SH-9 (E)	SH-9	SH-17	SH-9	107A	
12.	SH-12 (A)	SH-12	SH-14	SH-12	106	
13.	SH-12 (B)	SH-12	S-4	SH-12	4	
14.	SH-12 [C]	SH-12	ANCC Sdq.	SH-12	ANCC	
15.	SH-14(A)	SH-14	S-6	SH-14	6	
16.	SH-14(B)	SH-14	S-4	SH-14	4	
17.	SH-15(A)	SH-15	SH-25	SH-15	L1U1	
18.	SH-15(B)	SH-15	SH-27	SH-15	L2UI	
19.	SH-15(C)	SH-15	SH-29	SH-15	L3U1	
20.	SH-15(D)	SH-15	SH-37	SH-15	L6U1	
21.	SH-15[E]	SH-15	L4U	SH-15	L4LI	
22.	SH-15[F]	SH-15	Dn. Main Line	SH-15	L5U	
23.	SH-16 (A)	SH-J6	S-6	SH-16	6	
24.	SH-16 (B)	SH-16	S-4	SH-16	4	
25.	SH-17 [A]	SH-17	SH-37	SH-17	L6U1	
26.	SH17-[B]	SH-17	SH-39	SH-17	L7U1	
27.	SH17-[C]	SH-17	SH-41	SH-17	L8U1	
28.	SH-19	SH-19	SH-9	SH-19	9	
29.	SH-21[A]	SH-21	SH-45	SH-21	L10U	
30.	SH21-[B]	SH-21	SH-47	SH-21	LIU	
31.	SH21-[C]	SH-21	SH-49	SH-21	L12U	

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APPENDIX-"B"

Srl No	Shunt Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
32.	SH21-[D]	SH-21	SH-51	SH-21	.L13U1	
33.	SH25-[A]	SH-25	S-61	SH-25	61	
34.	SH25-[B]	SH-25	S-63	SH-25	63	
35.	SH27-[A]	SH-27	S-61	SH-27	61	
36.	SH27-[B]	SH-27	S-63	SH-27	63	
37.	SH-28	SH-28	SH-12	SH-28	107B	
38.	SH29-[A]	SH-29	S-61	SH-29	61	
39.	SH29-[B]	SH-29	S-63	SH-29	63	
40.	SH-30	SH-30	SH-12	SH-30	107B	
41.	SB-32(A)	SH-32	SH-14	SH-32	106	
42.	SH-32[B]	SH-32	SH-12	SH-32	107B	
43.	SH-34(A)	SH-34	SH-14	SH-34	106	
44.	SH-34(B)	SH-34	SH-12	SH-34	107B	
45.	SH-36(A)	SH-36	SH-U	SH-36	106	
46.	SH-36(B)	SH-36	SH-12	SH-36	107B	
47.	SH-37	SH-37	SH-43	SH-37	139	
48.	SH-38	SH-38	SH-16	SH-38	16	
49.	SH-39	SH-39	SH-43	SH-39	139	
50.	SH-40	SH-40	SH-16	SH-40	16	
51.	SH-41	SH-41	SH-43	SH-41	139	
52.	SH-42	SH-42	SH-16	SH-42	16	
53.	SH-43(A)	SH-43	S-61	SH-43	61	
54.	SH-43(B)	SH-43	S-63	SH-43	63	
55.	SH-43[C]	SH-43	S-69	SH-43	69	
56.	SH-43[D]	SH-43	SH-53	SH-43	148	
57.	SH-43(E)	SH-43	SCM.Gds Siding	SH-43	SGS	
58.	SH-43(F)	SH-43	Tower Wagon Sdg	SH-43	TWS.	
59.	SH-44	SH-44	SH-16	SH-44	16	
60.	SH-45	SH-45	SH-53	SH-4i	148	
61.	SH-47(A)	SH-47	SH-53	SH-47	148	
62.	SH-47(B)	SH-47	S-73	SH-47	73	
63.	SH-47[C]	SH-47	S-75	SH-47	75	
64.	SH-49(A)	SH-53	SH-53	SH-49	148	
65.	SH-49(B)	SH-49	S-73	SH-49	73	
66.	SH-49[C]	SH-49	S-75	SH-49	75	
67.	SH-51(A)	SH-51	S-53	SH-51	148	
68.	SH-51(B)	SH-51	S-73	SH-51	73	

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APPENDIX-"B"

Srl No	Shunt Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
69.	SH-51(C)	SH-51	S-75	SH-51	75	
70.	SH-52(A)	SH-52	SH-36	SH-52	LSD1	
71.	SH-52(B)	SH-52	SH-34	SH-52	L7D1	
72.	SH-52(C)	SH-52	SH-32	SH-52	L6D1	
73.	SH-53(A)	SH-53	S-69	SH-53	69	
74.	SH-53(B)	SH-53	S-71	SH-53	71	
75.	SH-53(C)	SH-53	S-73	SH-53	73	
76.	SH-53(D)	SH-53	S-75	SH-53	75	
77.	SH-64[A]	SH-&4	SH-52	SH-64	139	
78.	SH-64(B)	SH-54	SH-30	SH-54	LSD1	
79.	SH-64[C]	EH-64	SH-28	SH-64	L4D	
80.	SH-68[A]	SH-68	SH-52	SH-68	139	
81.	SH-68(B)	SH-S3	SH-30	SH-68	L5D1	
82.	SH-68[C]	SH-68	SH-28	SH-68	L4D	
83.	SH-70(A)	SH-70	SH-52	SH-70	139	
84.	SH-70(B)	SH-7Q	SH-30	SH-70	L5D1	
85.	SH-70[C]	SH-70	SH-28	SH-70	L4D	
86.	EH-72(A)	SH-72	SH-44	SH-72	L13D1	
87.	SH-72[B]	SH-72	SH-42	SH-72	L12D1	
88.	SH-72[C]	SK-72	SH-50	SH-72	L11D	
89.	SH-72[D]	SH-72	SH-38	SH-72	L10D1	
90.	SH-72[E]	SH-72	SH-52	SH-72	139	
91.	SH-72(F)	SH-72	SH-30	SH-72	L5D1	
92.	SH-72[G]	SH-72	SH-2S	SH-72	L4D	
93.	SH-88(A)	SH-88	SH-62	SH-88	139	
94.	SH-88(B)	SH-8S	SH-30	SH-88	L5D1	
95.	SH-88[C]	SH-88	SH-28	SH-88	L4D	
96.	SH-88[D]	SH-88	LSD	SH-88	L3D	
97.	SH-88[E]	SH-88	L2D	SH-88	L2D	
98.	SH-88(F)	SH-88	L1D	SH-88	L1D	
99.	SH-90A)	SK-90	SH-52	SH-90	139	
100.	SH-90(B)	SH-90	SH-30	SH-90	L5D1	
101.	SH-90[C]	SH-90	SH-28	SH-90	L4D	
102.	SH-90[D]	SH-90	L3D	SH-90	L3D	
103.	SH-90(E)	SH-90	L2D	SH-90	L2D	
104.	SH-90(F)	SH-90	L1D	SH-90	L1D	
105.	SH-92(A)	SH-92	SH-72	SH-92	158	
106.	SH-92[B]	SH-92	SH-68	SH-92	68	
107.	SH-94	SH-94	SH-72	SH-S4	158	
108.	SH-96(A)	SH-96	SH-44	SH-96	L13D1	

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APPENDIX-"B"

Srl No	Shunt Signal Route	From Signal	To Destination	Buttons Operated		Remark
				Signal	Route	
109.	SH-96(B)	SH-96	SH-42	SH-95	L12D1	
110.	SH-96[C]	SH-85	SH-40	SH-96	L11D	
111.	SH-96[D]	SH-96	SH-72	SH-96	158	
112.	SH-98(A)	SH-98	SH-44	SH-98	L13D1	
113.	SH-98(B)	SH-98	SH-42	SH-98	L12D1	
114.	SH-98[C]	SH-98	SH-40	SH-98	L11D	
115.	SH-98[D]	SH-98	SH-72	SH-98	158	

THE PUSH BUTTON CHART FOR SIDINGS. CRANK HANDLES AND LEVEL CROSSING GATES:

Sl. NO	Description of control	Buttons operated
1.	Releasing control for opening level crossing gate at KM 870/9-10	1 65+Group Trans GSB
2.	Withdrawing control after dosing level crossing gate at KM 870/9-10	165+Group Release GSRB
3.	Releasing control for opening level crossing gate at KM 870/13-14	1 66+Group Trans GSB
4.	Withdrawing control after closing level crossing gate at KM 870/13-14	1 66+Group Release GSRB
5.	Releasing control for Hot axle /Sub-station siding.	131+Group Trans GSB
	With drawing control of Hot-axle sub station Siding	131+ Group release GSRB
6.	Releasing control for Goods stable line siding	117+Group Release GSB
	With drawing control of Goods stable line siding	117 + Group release GSRB
7.	Releasing control for Goods stable line siding	128+Group Trans GSB
	Withdrawing control of Goods stable line siding	128 + Group release GSRB
8.	Releasing control for ANCC siding	104+Group Trans GSB
	Withdrawing control of ANCC siding	104 + Group release GSRB
9.	Permission to release CH-1 Key	CH-1 YN + Group CHRB
10.	Withdrawal of control of CH-1 Key	CH-1 YN + Rel. CHNB
11.	Permission to release CH-2 Key	CH-2 YN + Group CHRB
12.	Withdrawal of control of CH-2 Key	CH-2 YN + Rel. CHNB
13.	Permission, to release CH-3 key	CH-3 YN+ Group Trans CHRB
14.	Withdrawal of control of CH-3 Key	CH-3 YN+ Group Rel. CHNB
15.	Permission to release CH-4 key	CH-4 YN+ Group Trans CHRB
16.	Withdrawal of control of CH-4 Key	CH-4 YN+ Group Rel. CHNB

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Sl. NO	Description of control	Buttons operated
17.	Permission to release CH-5 key	CH-5 YN+ Group Trans CHRB
18.	Withdrawal of control of CH-5 Key	CH-5 YN+ Group Rel. CHNB
19.	Permission to release CH-6 key	CH-6 YN+ Group Trans CHRB
20.	Withdrawal of control of CH-6 Key	CH-6 YN+ Group Rel. CHNB
21.	Permission to release CH-7 key	CH-7 YN+ Group Trans CHRB
22.	Withdrawal of control of CH-7 Key	CH-7 YN+ Group Rel. CHNB
23.	Permission to release CH-8 key	CH-8 YN+ Group Trans CHRB
24.	Withdrawal of control of CH-8 Key	CH-8 YN+ Group Rel. CHNB
25.	Permission to release CH-9 key	CH-9 YN+ Group Trans CHRB
26.	Withdrawal of control of CH-9 Key	CH-9 YN+ Group Rel. CHNB
27.	Permission to release CH-10 key	CH-10 YN+Group Trans CHRB
28.	Withdrawal of control of CH-1 0 Key	CH-10 YN+Group Rel. CHNB
29.	Permission to release CH-1 1 key	CH-11 YN+Group Trans CHRB
30.	Withdrawal of control of CH-1 1 Key	CH-11 YN+Group Rel. CHNB
31.	Permission to release CH-1 3 key	CH-13 YN+Group Trans CHRB
32.	Withdrawal of control of CH-1 3 Key	CH-13 YN+Group Rel. CHNB
33.	Permission to release CH-1 4 key	CH-14 YN+Group Trans CHRB
34.	Withdrawal of control of CH-1 4 Key	CH-14 YN+Group Rel. CHNB
35.	Permission to release CH-1 5 key	CH-15 YN+Group Trans CHRB
36.	Withdrawal of control of CH-1 5 Key	CH-15 YN+Group Rel. CHNB
37.	Permission to release CH-1 6 key	CH-16 YN+Group Trans CHRB
38.	Withdrawal of control of CH-1 6 Key	CH-16 YN+Group Rel. CHNB
39.	Permission to release CH-1 7 key	CH-17 YN+Group Trans CHRB
40.	Withdrawal of control of CH-1 7 Key	CH-17 YN+Group Rel. CHNB
41.	Permission to release CH-18 key	CH-18 YN+Group Trans CHRB
42.	Withdrawal of control of CH-18 Key	CH-18 YN+Group Rel. CHNB
43.	Permission to release CH-19 key	CH-19 YN+Group Trans CHRB
44.	Withdrawal of control of CH-1 9 Key	CH-19 YN+Group Rel. CHNB
45.	Permission to release CH-20 key	CH-20 YN+Group Trans CHRB
46.	Withdrawal of control of CH-20 Key	CH-20 YN+Group Rel. CHNB
47.	Permission to release CH-22 key	CH-22 YN+Group Trans CHRB
48.	Withdrawal of control of CH-22 Key	CH-22 YN+Group Rel. CHNB
49.	Permission to release CH-23 Key	CH-23 YN+Group Trans CHRB
50.	Withdrawal of control of CH-23 Key	CH-23 YN+Group Rel. CHNB
51.	Permission to release CH-24 key	CH-24 YN+Group Trans CHRB
52.	Withdrawal of control of CH-24 Key	CH-24 YN+Group Rel. CHNB
53.	Permission to release CH-25 key	CH-25 YN+Group Trans CHRB
54.	Withdrawal of control of CH-25 Key	CH-25 YN+Group Rel. CHNB
55.	Permission to release CH-26 key	CH-26 YN+Group Trans CHRB
56.	Withdrawal of control of CH-26 Key	CH-26 YN+Group Rel. CHNB

[CH.SRINIVAS]
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OPERATION OF SIGNALS:

All signals are directly operated from the Route Relay interlocking cabin as shown in the Station Working Rules diagram.

17.0 STATION MASTER KEY FOR OPERATING PANEL:

This key when inserted in the lock [provided on the Operating Panel] and turned right the panel becomes operative. The key when inserted in the lock and either turned to left or extracted out from the lock renders the panel inoperative except for putting back the signals to "ON" position in case of emergencies. When the SM's key is inserted and turned to right a white indication lights by the side of SM's key.

18.0 DISTANT SIGNALS AND THEIR ASPECTS:

The distant signals work automatically, since the aspects of these signals being controlled by the aspect of the respective Home Signals.

19.0 EMERGENCY OPERATIONS AND THE COUNTERS:

Operation of the following buttons is recorded on the respective counters provided on the operating panel.

- i) Control for Emergency Point Button [EWN].
- ii) Control for Emergency full Route Release Button [EUUYN].
- iii) Control for Emergency Route Section Release Button [EUYN].
- iv) Control for "Calling on" Signal [COGGN].
- v) Control for Emergency Overlap Release Button [OYN].

The Panel Station Master on duty should keep a proper record of all such operations. A Register with separate portions for each button should be maintained. Each time a button is operated the readings on the respective counter should be recorded in the register mentioning clearly therein the circumstances under which the emergency operation had to be resorted to. At the time of handing over charge the relieved Panel Station Master should record and sign the last readings on the counters in the register and the Panel Station Master who takes over charge must verify, by physical check, the correctness of the readings recorded and counter sign the entry.

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In case of failure of track circuit, the points can be set by operation of the emergency point button [EWN] and the point button concerned [after unlocking the EWN control lock] provided the point concerned was not engaged earlier or not locked. This electrical lock [ignition type] shall be in personal custody of the cabin Station Master and no emergency operations should be carried out without his permission.

The Panel Station Master on duty is responsible for all emergency operations explained above. The Panel Station Master is responsible for correct operation of the emergency buttons and records the operations in the register.

The Panel SM should not permit any unauthorized person to operate the control panel.

For every operation the signal button at the entrance point and the route button at the exit point have to be simultaneously positively pressed down for initiating the route setting, locking and taking off the signal.

Similarly for any individual point operation, the point button [WN] and the group point button [WWN] have to be pressed simultaneously.

The Panel Station Master on duty must ascertain by visual verification that the indication appearing on the indicating panel is in conformity with the operation of the buttons on the operating panel. The Panel Station Master must also ensure that not more than two buttons are operated simultaneously at any given time.

20.0

APPROACH LOCKING OF A ROUTE:

Once a signal [either a stop signal or a shunt signal] is taken off, the route including signal overlap in case of main signal gets back locked and the set route cannot be altered or interfered with unless the signal concerned is put back to "ON" position and the route is cancelled by emergency three button operation. After the initiation of such emergency three Button operation, the complete route gets cancelled provided there is no train on the approach track. If there is a train/vehicle on the approach track, the route gets approach locked and can be released only after the count down of 120 Seconds by the timer. [The approach locking distance being variable according to the aspect of the signal in rear and other important safety considerations such as maximum permissible sectional speed on the approaching line etc.]

The special cases of exceptions are the signal No.6,30,67,69,71,73,75,97,99 where dead approaching locking is provided with a special conditional releases.

The shunt signal No.3,5,6,16,11,31,32,45,51,58,65,68,80 have been provided with dead approaching locking [in the absence of approach track circuit] and in such case the route once set cannot be altered by emergency operation for a period of 120 Seconds after putting back the signal to "ON" position. Every such three button emergency cancellation is countered on the veeder counter.

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APPENDIX-"B"**21.0 EMERGENCY RELEASE OF INDIVIDUAL – ROUTE SECTION AND OVERLAPS:**

A complete route of signal comprises of one or more Route Sections [as also the overlap in case of a stop signal] and whenever any route section or overlap is not released by either passage of the train or by emergency cancellation of the entire route as already mentioned above the emergency cancellation of the Route Section with the co-ordination of the SSE (Sig)/SE (Sig)/RRI on duty can be done and such cancellation is individually counted on the counter fitted on the panel.

22. TAKING OF CALLING ON SIGNALS:**TAKING 'OFF' CALLING ON SIGNALS:**

The Calling 'ON' signals have been provided below the following stop signals at North End

N O R T H E N D:

Sl.No	Button No	Signal No	
1.	C 1	Up Home signal No.1	(on Up main line)
2.	C 3	Down Home signal No. 3	(on KK line]
3.	C 9	Up routing signal No. 9	(on Up main line)
4.	C 12	On routine starter signal No.12	(on Dn. main line)
5	C 14	On routing starter signal No.14	(on KK line)
6.	C 15	On routing Home signal No. 15	(on Dn. main line)
7.	C 16	On routing starter signal No. 16	(on VSP line)
8.	C 17	On routing Home signal No. 17	(on KK line)
9.	C 21	On routine Home signal No. 21	(on VSP line)
10.	C 28	On starter signal No. 28	(on Dn. main line)
11.	C 30	On starter signal No. 30	(on Dn. loop)
12.	C 32	On starter signal No. 32	(on L.6 goods line)
13.	C 34	On starter signal No. 34	(on L.7 KK line)
14.	C 36	On starter signal No. 36	(on L.8 KK line)
15.	C 38	On starter signal No. 38	(on L10 VSP line)
16.	C 40	On starter signal No. 40	(on LI 1 VSP line)
17.	C 42	On starter signal No. 42	(on L.12 VSP line)
18.	C 44	On starter signal No. 44	(on L.13 VSP line)
19	C-11	On UP Home signal No.11	(on middle line)
20	C-203	On DN Home signal No.203	(On K.K line)
21	C-214	On Intermediate signal No.214	(On DN line)

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The "Calling on" signals have been provided below the following stop signals at South end.

Sl.No	Button No	Signal No
1.	C25	On starter signal No. 25 (on Up 2 TM * loop)
2.	C27	On starter signal No. 27 (on Up 1" loop)
3	C29	On starter signal No. 29 (on Up main line)
4.	C37	On starter signal No.37 (on line No. 6)
5.	C39	On starter signal No.39 (on line No. 7)
6.	C41	On starter signal No. 41 (on line No. 8)
7.	C43	On routing starter signal No. 43 (on KK line)
8.	C45	On starter signal No. 45 (on line No. 10)
9.	C47	On starter signal No. 47 (on line No. 11)
10.	C49	On starter signal No. 49 (on line No. 12)
11.	C51	On starter signal No. 51 (on line No. 13)
12.	C52	On routing Home signal No. 52 (on KK line)
13.	C53	On routing starter signal No. 53 (on VSP line)
14.	C62	On routing Home signal No. 62 (on Dn. main line)
15.	C66	On routing Home signal No. 66 (on goods despatch line)
16.	C68	On routing Home signal No. 68 (on KK line)
17.	C72	On routing Home signal Na. 72 (on Bypass line)
18.	C78	On Dn. Home signal No. 78 (on goods despatch line)
19.	C80	On Up. Home signal No. 80 (on KK line)
20.	C82	On Dn. Home signal No. 82 (on bye-pass line)
21.	C84	On Dn. Home signal No. 84 (on VSP line No.1)
22.	C86	On Dn. Home signal No. 86 (on VSP line No.2)

During the failure of the stops signal either due to failure of any track circuits on the route including the overlap or for any other causes the "Calling on" signals may be taken off after the train has come to a stand at the stop signal, provided all the other conditions for taking off the stop signal have been fulfilled and the approach track immediately in rear of the said stop signal is occupied by train. After initiating the "Calling on" signal the "Calling on" signal indication shows a white flashing light for 120 seconds and after which it shows a steady white light. It is only when such a steady white light appears the "Calling on" signal displays "OFF aspect". Every such operation is registered on a counter provided on the operating panel.

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23. FAILURE OF APPROACH TRACK AND SPECIAL MEASURES FOR TAKING OFF A "CALLING ON" SIGNAL:

In case of failure of the approach track, instead of taking off the "Calling on" signal the trains shall be piloted treating "Calling on" signal as failure and S & T official shall be informed for immediate rectification.

During the failure of track circuit before taking off "Calling on" signal the clearance of the track on the entire route between stop signal to stop signal must be certified by the Station Master to the Panel Station Master. In all cases of reception/dispatch of a train by taking off the "Calling on" signal necessary particulars including the train No. "Calling on" signal No. and the No. registered on the corresponding veeder counter should be recorded in a register maintained for the purpose.

24. TAKING OFF THE SHUNT SIGNALS:

For taking off a shunt signal the corresponding route button and the shunt signal button should be pressed simultaneously and released.

25. CLEARING OF STOP SIGNAL:

Whenever it is necessary to clear a stop signal, it is necessary to press the signal button and the exit button where after this route setting is initiated, the route is lined up and locking executed on all the route sections and the overlap thus holding the route ultimately proving the way and circuits for the signal clearance.

26. ORDINARY AND SPECIAL ALTERNATIVE OVERLAP OF STOP SIGNALS:

Some of the Stop signal have been provided with more than One over lap [Which is designated after the next stop signal a head].

The Details of these over laps are as follows:

S.N	Signal No	Route No.	Move to	Overlap	Points.
1	S1 [A], C1 [A]	1 A	S-9	a) OV1-9	105 N
				b) OV2-9	105 R, 107 N
				c) OV3-9	105 R, 107 R
2	S1 [B], C1 [B]	1 B	S-17	a) OV1-17	115 N, 116 N
				b) OV3-17	115 R
3	S1 [C], C1 [C]	1C	S-21	a) OV1-21	121 N, 122 N
				b) OV2-21	121 N, 122 R
				c) OV3-21	121 R
4	S3 [A], C3 [A]	3A	S-15	a) OV2-15	109N, 110R
5	S3 [B], C[B]	3B	S-17	a) OV1-17	115N,116N
				b) OV2-17	115N, 116N
				c) OV3-17	115R

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Srl No	Signal No	Route No.	Move to	Overlap	Points.
6	S3[C], C3[C]	3C	S-21	a) OV1-21	121N, 122N
				b) OV2-21	121N, 122R
				c) OV3-21	121R
7	S9[A], C9 [A]	9A	S-25	a) OV1-27	132N, 133N
				b) OV2-27	132N,151N,152N,153N,133R
8.	S9 B, C9 B	9B	S-27	a) OV1-27	132 N, 133 N
				b] OV2-27	132N, 151N. 152H 153N. 133R
9.	S9[C].C9[C]	9C	S-29	a] OV1-29	133N, 151N, 152N, 153N
				b] OV2-29	133N, 151N, 152N, 153R
10.	S9 D. C9 [D]	9D	S-15	a] OVI-15	109 R
11.	S9 [E], C9 [E]	9E	S-17	a) Ovl-17	115 N, 116 N
				b) OV3-17	115R
12.	S12 A, C12 A	12A	S14	a) OV1-14	102N, 103 N
13.	S15 A, C15 A	15A	S25	a) OV1-25	133 N, 132 R
				b) OV2-25	151N. 152N, 153N. 132R, 133R
14.	S15 B, C15B	15B	S27	a) OV1-27	132 N, 133 N
				b) OV2-27	132N, 151N, 152N, 153N, 133R
15.	S15 C, C15 C	15 C	S27	a) OV1-29	133N, 151N, 152N. 153N
				b) OV2-29	133N, 151N. 152N, 153R
16.	S15 D, C15 D	15D	S37	a) OV1-37	129 N
				b) OV2-37	130N, 129R, 139N
17.	S17 A, C17 A	17A	S37	a) OV1-37	129 N
				b) OV2-37	130N, 139N, 129R
18.	S17 B, C17 B	17B	S39	a) OV-39	129N, 130N, 139N
19.	S17 C, C17 C	17C	S41	a) OV1-41	130 N
				b) OV2-41	139 N, 130 R
20.	S21 A, C21 A	21 A	S45	a) OV1-45	143 N
				b) OV2-45	143 R, 146 N, 148 N
21.	S21 B, C21 B	21 B	S47	a) OV-47	145 N, 146 N
22.	S21 C, C21 C	21 C	S49	a) OV-49	144 N, 145 N
23.	S21 D, C21 D	21 D	S51	a) OV1-51	144 N
				b) OV2-51	145 N, 144 R
24.	S28 [1], C28	2811]	S12	a) OVI-12	105 N, 106 N
25.	S28 [2], C28	2812]	S 12	a) OV2-12	105 N, 106 R
26.	S30 [1], C30	3011]	S 12	a) OV1-12	105 N, 106 N
	S30 [2]. C30	30[1]	S 12	b) OV2-12	105 N, 106 R
27.	S32 A, C32 A	32 A	S14	a) OV1-14	102 N, 103 N
	S32 B, 032 B	32 B	S12	b) OV1-12	105 N, 106 N
28.	S34 A, C34 A	34 A	S14	a) OV1-14	102 N, 103 N
	S34 A, C34 A	34A	S14	b) OV2-14	102 R, 103 N
29.	S34 B, C34 B	34B	S12	a) OVI-12	105 N, 106 N
30.	S36 A, C36 A	36 A	S14	a) OV1-14	102 N, 103 N
				b) OV2-14	102R, 103N
31.	S36 B, C36 B	36 B	S 12	a) OV1-12	105N, 106N
32.	S37 [1], C37	37 [1]	S43	a) OV1-43	139 N
	S37 [2], C37	37 [2]	S43	a) OV2-43	139 R, 140IR

Srl No	Signal No	Route No.	Move to	Overlap	Points.
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33.	S38 [1] C38	38[1]	S 16	a) OVI-16	102 N. 103 R
	S38 [2] C38	38[2]	S 16	a) OV2-16	102 R, 103 R
34.	S39 [1]. C39	39[1]	S 43	a) OV1-43	139 N
	S39 [2]. C39	39[2]	S 43	a) OV2-43	139 R. 140 R
35.	S40 [1]. C40	40[1]	S 16	a] OVI-16	102 N. 103 R
36.	S40 [1]. C40	40[21	S 16	a) OV2-16	102 R, 103 R
	S41 [2]. C41	41[1]	S 43	a) OVI-43	139N
	S41 [2]. C41	41[2]	S 43	a) OV2-43	139R, 140 R
37.	S42 [1], C42	42[1]	S 16	a) OVI-16	102 N, 103 R
	S42 [2], C42	42[2]	S 16	a) OV2-16	102 R, 103 R
38.	S43[D],C43[D]	43D	S 53	a) OV1-53	158 N
39	S44 [1], C44	44[1]	S 16	a) OV1-16	102 N, 103 R
	S44 [2], C44	44[2]	S 16	a) OV2-16	102 R, 103 R
40	S45 [1], C45	45[1]	S 53	a) OV1-53	158N
	S45 [2], C45	45[2]	S 53	a) OV2-53	158R
41.	S47 [A], C47W	47[A]	S 53	a] OV1-53	158N
42.	S49[A]. C49[A]	49[A]	S 53	a) OV1-53	158N
43.	S51[A1, C51[A]	51[A]	S 53	a) OV1-53	158 N
44.	S52[A].C52[A]	52[A]	S 36	a] OVI-36	115 N
				b) OV2-36	106N. 107N. 108N, 115R
				c] OV3-36	115R. 107 R
45.	S52[B].C52[B]	52[B1	S 34	a] OV1-34	106N. 107N. 108N. 115N, 116N
				b] OV2-34	116N, 115N. 107R
46.	S52[C].C52[C]	52[C1	S 32	a] OV1-32	116N, 107 N. 109 R
				b] OV2-32	106N. 107N. 108N. 115N, 116R
47.	S62[A].C62[A]	62[A]	S 52	a] OV1-52	130 N, 129 N
				b] OV2-52	130 R
				c] OV3-52	130 N. 129 R
48	S62[B].C62[B]	62[B]	S 30	a] OV1-30	114N
				b) OV2-30	110N. 109N. 107N, 114R
49.	S62[C].C62[C]	62 [C]	S 28	a] OV-28	114N. 110 N, 109 N, 107N
50	S66[A].C66[A]	66[A]	S 52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130 N. 129 R
51.	S66[B].C66[B]	66[B]	S 30	a) OV1-30	114N
				b) OV2-30	110N, 109N, 107N, 114R
52.	S66[C].C66[C]	66[C]	S 28	a) OV-28	114N. 110N, 109 N. 107 N

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Sri No	Signal No	Route No.	Move to	Overlap	Points.
53.	S68[A],C68[A]	68[A]	S 52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130 N, 129 R
54.	S68[B],C68[B]	68[B]	S 30	a) OV1-30	114 N
				b) OV2-30	110N, 109N, 107N, 114R
55.	S68[C],C68[C]	68[C]	S 28	a) OV-28	114N, 110N, 109N, 107N
56.	S72[A],C72[A]	72[A1]	S 44	a) OV1-44	123 N
				b) OV2-44	121 R, 123 R
57.	S72[B],C72[B]	72[B]	S 42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
58.	S72[C],C72[C]	72[C]	S 40	a) OV-40	122 N, 121 N
59.	S72[D],C72[D]	72[D]	S 38	a) OVI-38	122 N
				b) OV2-38	121 N, 122R
60.	S72[E],C72[E]	72[E]	S52	a) OV1-52	130 N, 129 N
				b) OV2-52	130 R
				c) OV3-52	130N,129R
61.	S72[F],C72[F]	72[F]	S30	a) OV1-30	114N
				b) OV2-30	110N,109N,107N,114R
62.	S72[G],C72[G]	72[G]	S28	a) OV-28	114N,110N,109N,107N
63.	S78[A],C78[A]	78[A]	S72	a) OV1-72	148 N
64.	S78[B],C78[B]	78[B]	S68	a) OV1-68	150 N, 148 N, 147 N
65.	S78[C],C78[C]	78[C]	S66	a) OV 66	149 N
66.	S80[A],C80[A]	80[A]	S72	a) OV1-72	148 N
67.	S80[B],C80[B]	80[B]	S68	a) OV1-68	150N, 148N, 147N
				b) OV2-68	150N, 148N, 147R, 139N, 140N
68.	S82[1],C82[1]	82[1]	S72	a) OV1-72	148 N
69.	S82[2],C82[2]	82[2]	S72	a) OV2-72	148 R, 147 N
70.	S84[A],C84[A]	84[A]	S44	a) OV1-44	123 N
				b) OV2-44	121 R, 123 R
71.	S84[B],C84[B]	84[B]	S42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
72.	S84[C],C84[C]	84[C]	S40	a) OV 40	122 N, 121 N
73.	S84[D],C84[D]	84[D]	S72	a) OV1-72	148 N
				b) OV2-72	148 R, 147 N
74.	S86[A],C86[A]	86[A]	S44	a) OVI-44	123 N
				b) OV2-44	121 R, 123 R
75.	S86[B],C86[B]	86[B]	S42	a) OV1-42	123 N, 121 N
				b) OV2-42	123 N, 121 R
76.	S86[C],C86[C]	66[C]	S40	a) OV40	122 N, 121 N
77.	S86[D],C86[D]	86[D]	S72	a) OV1-72	148 N
				b) OV2-72	148 R, 147 N
				c) OV3-72	140 N, 139 N, 147 R, 148 R

NOTE: Whenever any route is initiated by pressing the entrance and exit buttons, OV will set automatically along with the route. OV1 or OV2 can be set either setting the route of the head signal or according to the line of the points as the case may be.

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Alternative overlap have been provided for some signals affording flexibility in the yard operations. When a route is initiated, the overlap [designated as OV] is automatically set over the route on which the train travels. But when an alternate overlap has to be set, first the route ahead has to be set by operation of entrance and exit buttons, then initiate the routes of the rear signal – after this operation the signal ahead may not be put back to “ON” and the route cancelled.

For these over laps, it is not necessary to initiate the signal route for the advance section. The overlaps will be set according to the line of the point at the time of the initiation of the route and therefore the Panel Station Master has to be mindful of keeping of the points on the overlap in the desired position before initiating the route.

27.0 TIME RELEASE OF OVERLAP:

Any overlap, which is set for signaled route will be released after the train comes and stops at the berthing track to ensure that the train has come and stopped on berthing track. A time release of 120 seconds is provided for the release of overlap. Accordingly counting of time space as soon as the train comes on the berthing track just in rear of the signal and after a lapse of 120 seconds the overlap is released automatically permitting other routes to be set on the portion of the overlap.

In case of failure of release of the overlap at the end of 120seconds due to any reason, emergency overlap release is effected by pressing the concerned route button and a overlap release button [OYN]. The overlap is released immediately and the operation is recorded in the emergency overlap is counter [OYN].

28.0 PUTTING BACK THE SIGNAL TO “ON” POSITION:

In exigencies, when a stop signal or a “Calling on” signal or a Shunt signal has to be put back to “ON” before passage of the train, the concerned signal button [GN] and the emergency signal cancellation button [EGGN] should be pressed simultaneously.

29.0 LOCKING OF POINTS NORMAL AND SPECIAL CASES:

Normally the electric machine operated points can be set and locked provided the point zone track circuit is free and the subject point is not locked either by a route section or an overlap on flank protection arrangement.

The locking on the point is normally released immediately after the clearance of the route section or the overlap and the flank protection locking is released after the clearance of the controlling route section.

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Appendix-'B'**30.0 INDIVIDUAL OPERATION OF POINTS WHEN THE TRACK CIRCUIT/CIRCUITS IN THE POINT ZONE HAVE NOT FAILED:**

Whenever an individual point/crossover is to be set the point button [WN] concerned and the group button [WWN] should be simultaneously pressed and released. Such an operation will change the point /crossover from normal to reverse or from reverse to normal provided the track circuit/circuits in the point zone are not occupied.

Whenever any point cannot be operated to house either in normal or reverse position, a flashing indication appears on the point concerned on the indication panel. The point can be set to its original position by the operation of the point button [WN] concerned and the group point button [WWN].

31.0 INDIVIDUAL OPERATION OF POINTS IN CASE OF FAILURE OF TRACK CIRCUITS /TRACK CIRCUITS POINT ZONE:

In the event of failure of the track circuits controlling the points, the Panel Station Master should first personally or through field AYM ensure that the track circuit concerned is not occupied by a train /vehicle and then go for emergency operation of points the Cabin Station Master should unlock the EWN lock on the operating panel by operating EWN key [provided for the purpose], press the point button [WN] along with the emergency point button [EWN] and release the buttons. Each time point is thus operated, the same will be recorded on the "EWN" counter.

32.0 FAILURE OF THE POINTS DUE TO ANY OTHER CAUSES:

If any point fails before a route is lined up, the Cabin Station Master should first try to set and reset the same point by individual operation to ascertain if the said point can be set in a particular position.

If the said points cannot be set in any position, the Cabin Station Master should not use the route concerned for normal signaled movement until the defect is rectified by Signal staff and certificate to this effect is obtained from SE [Sig],/ JE [Sig] on duty. However, Crank handle operation may be done.

33.0 PADLOCKING AND CRANKING OF POINTS WITH CRANK HANDLE AND ITS CONTROLLING KEYS AND SPECIAL PRECAUTIONS:

For the use of Crank handle for motor operated points the instructions laid down in rule No.20.06 of operating Manual should be followed.

When the points are set by means of Crank handle, the field Station Master on duty shall ensure that the entire route is correctly set, all the facing and trailing points are clamped and padlocked.

All the points on the route must be clamped and padlocked for any signaled movement.

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The keys of the padlock of all the clamped and locked points should be kept in the personal custody of the field Station Master before the pilot memo is handed over to the Loco pilot.

When once the route is so set manually by the field Station Master and all the points on the route are clamped and padlocked, the same shall not be interfered with in any way until the movement over the points concerned is completed or, the movement is cancelled, and such cancellation is authenticated by exchange of Private Number.

If any point has failed after setting of the route in Normal/Reverse position or both. A white indication strip start flashing depending upon the position at which the point had failed. In such case the route concerned shall be cancelled and shall not be used until the defect is rectified by signal staff.

34.0 RELEASING OF A SUB-ROUTE SECTION:

If any route section over a point zone is not released after passage of a train due to failure of track circuit or otherwise, the route section can be released by means of Emergency operation by Station Master on duty in presence of SE (Sig) .

35.0 FAILURE OF TRACK CIRCUITS AND SIGNALS:

In the event of failure of track circuits over points zone setting of the points will be done by Emergency operation after the Field SM/YM ensures that the points zone is clear of vehicles and gives an assurance supported by a Private number to that effect. In case of failure of track circuits, calling-on-signals where provided may be taken off. If there is no Calling-on-signal or if the same is out of order, the train concerned should be piloted past the signal concerned up to next stop signal ahead after ensuring the clearance of the route and setting, clamping and padlocking the points on the route by the field SM.

36.0 SIGNAL ASPECT:

The aspect control chart of the signals in Simhachalam Yard in accordance with the aspect control chart as indicated in the Interlocking Plan No:-23090 Alt-'A'[Simhachalam RRI].

The failure of a Signal lamp of an aspect at site renders the signal to assume its next restrictive aspect. During failure of signal lamp the physical aspects of the signal at site and indications on indication panels are given below.

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Srl No	Aspect Displayed before failure of signal lamp.		Particulars of failure of lamp	Aspect displayed after failure of signal lamp.	
	By signal at site	By signal symbol on panel		By signal at site	By signal symbol on panel.
1.	Red	Red	Red lamp-main filament fused.	Dim red.	Flashing red.
2.	Red	Red	Red lamp-both filaments fused.	Bland. Signal in rear reverts back to ON position.	Flashing red.
3.	Yellow	Green	Yellow lamp main filaments fused	Dim yellow	Steady Green.
4.	Yellow	Green	Yellow lamp both filaments fused.	Red	Flashing Green with Red.
5.	Double yellow	Green	One yellow lamp both filaments fused	Yellow	Flashing Green
6.	Double yellow	Green	Both yellow lamps both filaments of both lamps fused.	Red	Flashing Green with steady red
7.	Green	Green	Green lamp main Filament or auxiliary filament fused	Double yellow in 4 aspect signals and yellow in 3 aspect signals.	Flashing Green.
8.	Green	Green	Green lamp both filaments fused	Yellow	Flashing Green.

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SPECIAL NOTE:

- i)** In addition to the failure of both filaments of Green lamp, failure of one or both filaments of one or both filaments of yellow fail the aspect assumed by the signal at site is Red.
- ii)** A small flashing white light is lit near the main signal symbol, if the signal is put to danger and route cancellation is initiated when it is approach locked. This light remains flashing for 120 seconds after which it becomes steady. Then the panel Station Master should commence three button emergency route cancellation.
- iii)** When a Calling on Signal below a stop signal is taken off, a white dot is lit below the stop signal.
- iv)** White is not provided on indication panel/operating panel is lit above Green indication signal symbol whenever signal is taken "off" with route indicator for a diversion.

37.0 ANCC SIDING:

The siding takes off from the UP Line at KM 868/8-9 between UP Home and UP routing Home signals of Simhachalam North towards Howrah end to serve the M/S Andhra Cement Company Limited. [For detail working instructions of siding see Appendix "H" of this SWR]

38.0 TOWER WAGON SIDING:

The Tower wagon siding takes off from KK Line towards Block Hut side of the yard. The Tower wagon siding point No. 150 to be operated from the panel to set the route for placement or drawn out the Tower Wagon. When the point is set towards Tower wagon siding the UP reception and Down despatch signals of KK Line will held locked.

39.0 i) HOT AXLE SIDING /SUB-STATION SIDING:

The Hot Axle siding is takes off from Line No. 1 at VSKP end of the yard. Hand plunger lock is fitted at entrance point and the corresponding derailing switch is operated by an Arc lever fitted at site. The Hot Axle siding point key will be released at site, on pressing push button No. 131 [Colour Green] and group slot button [GSB] from RRI Panel. The key, which is released from RKT to be carried manually to the site and operate the point for placement or drawn out any vehicle. When the key is extracted from RKT reception and despatch signals for Line No.1 is held locked. The Hot Axle siding is having CSL of 60 M. A sub-station siding is takes off from the hot axle siding and terminated as dead end. The sub-station siding is operated by a hand point fixed at site. The sub-station siding having CSL of 50 M.

ii) HOT AXLE SIDING :

A hot axle siding takes off from goods stabling siding having both sides entry. It is isolated by means of DS at either end. The entrance points of DS are hand operated by Arc lever provided at site. The points are locked by means of clamping and padlock during shunting operations.

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ii) SCM Siding

SCM siding takes 'OFF' from SE despatch line at South end (ELS/Block hut end). The entry to & from siding is authorized by Shunt signals interlocked with yard signal of KK grid line No 6, or 7 or 8.
The siding has 2 spurs which terminates into a dead end at GPT end.

The Main Spur CSR 905.6M

And

The Loop Spur CSR 91.06 M

The loop spur takes 'off' from main spur near the SCM station foot over bridge and is hand operated locally at site.

When the movement is not covered by taking 'OFF' shunt signal due to failure or due to any other reason the points facing & trailing must be clamped and pad locked before allowing any movement, the operating staff in charge of shunting operation shall ensure the same and confirm to the SM RRI supported by a private number through paging & talk back or VHF set if provided. The authority for shunting in such case shall be on form. T/806 the details of work to be done in siding shall also be written in the shunting order.

40. SIGNAL REPLACEMENT AND CANCELLATION OF A ROUTE ALREADY SET:

Once a signal is taken off it should not be put back to "ON" position unless absolutely required. For this, the signal button concerned and the emergency signal group button EGGN should be pressed simultaneously. This operation will make the signal to assume 'ON' aspect while the route is still held and the three button emergency route cancellation processes must be initiated for cancelling the route already set. Refer to the following Para.

41.0 CANCELLATION OF A ROUTE:

If, after setting of the whole route and taking off the signal concerned, the route is to be altered the signal concerned must first be put back to "ON". If there is a train on the approach track or the signal is provided with dead approach locking the subject route gets released only after count-down of 120seconds after the signal is put back to "ON". Then route can be cancelled by three buttons cancellation.

The countdown of 120 seconds time interval is indicated by flashing white light on the approach lock indicator provided at the foot of the corresponding signal symbol on the indication panel. After the interval 120 seconds a steady white light appears and the flashing light ceases.

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The panel Station Master should press the signal button and the emergency button EUUYN, keeping the signal button still pressed on, he should press the relevant route button. This operation will release the whole route and this will be indicated by extinguishing of the concern route lights on the panel. However, if the approach track of the signal is not free the cancellation cannot be done immediately. In both cases this cancellation operation is counted electrically on the digital counter. The transaction along with the time and reasons and the number registered on the counter should be recorded in a register specially kept for the purpose.

42.0 REPLACEMENT OF ‘CALLING-ON-SIGNAL TO ‘ON’ POSITION:

After taking off a Calling-on-Signal if the same is to be put back to “ON position, the signal button concerned” [GN] and the emergency signal group button [EGGN] should be pressed simultaneously. In this case, also the route that was originally set and locked by the process of clearance of the signal is to be cancelled in accordance with instructions contained in the route cancellation Para mentioned above.

43.0 ROUTE INDICATORS:

- a) The Signal No.S16, S32, S36 on North end and S25 on South end are provided with stencil type route indicators and are provided above the respective signals in the form of the rectangular box pattern fitted with a transparent sheet as affront cover plate. The stencil type route indicator will indicate the concerned route by means of illuminated letter (KK/M) as the case may be.
- b) The signal No. S1, S3, S9, S12, S15, SI 7.S21 &S34 on North end and S27, S29, S43, S45, S47, S49, S51, S52, S53, S62, S66, S68, S73, S78, S80, S84 and S86 on South end are provided with directional type route indicators. Directional type route indicators are provided in the form of 5 lunner white lights above the respective signals at varying degrees from the vertical to the left or to the right side of the loco pilot. In case of more than one such route indicators on the same side the top most corresponds to the first loop and other for subsequent loops in the regular order of sequence.

44.0 FORMATS FOR VARIOUS EMERGENCY OPERATIONS**FORMAT [a] FOR EMERGENCY SUB-SECTION ROUTE RELEASE:**

Date & Time	Route Section	Counter Number		Remarks	Signature	
		Before Release	After Release		On duty Dy.SS RRI	On duty SSE [Sig]/ SE [Sig]/RRI

FORMAT [b] FOR EMERGENCY OVER LAP RELEASE.

Date & Time	Overlap route button No.	Counter Number		Remarks	Signature	
		Before Release	After Release		On duty Dy.SS RRI	On duty SSE [Sig]/ SE [Sig]/RRI

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FORMAT [c] FOR EMERGENCY POINT OPERATION:

Date & Time	Time of operation	Counter Number		Track circuit No failed.	Signature
		Before Operation	After Operation		On duty Dy.SS RRI

FORMATE [d] FOR EMERGENCY FULL ROUTE CANCELLATION:

Date & Time	Time of operation	Counter Number		Route cancelled	Reason for cancellation	Signature
		Before Operation	After Operation			On duty Dy.SS RRI

45.0 EMERGENCY CRANK HANDLE INTERLOCKING:

Except the mechanically operated points which are duly controlled by the Route Relay Cabin, all points in Simhachalam North Yard are operated through electrical point machine provided at site. These are remotely controlled and operated from Route Relay Cabin normally. Whenever there is a failure of a power-operated point, it should be crank handled at site. For this purpose, it is necessary to insert aperture with the help of the concerned and associated control key. Unless this aperture is opened by the operation of the controlling key the emergency crank handle cannot be inserted in the motor and operated to set the points. This control key will remain held on the point motor while it is being operated by the emergency crank handle. After the point is set and the crank handle is removed, the control key can be extracted and in that process the crank handle-inserting aperture gets closed and locked automatically.

The crank handle interlocking key is inserted in the crank handle interlocking box housed in the location/goomty and turned anti-clockwise when, it gets locked. This key cannot be extracted from the box unless the control for releasing the key is transmitted from the Route Relay Cabin when the release control is transmitted from the Route Relay Cabin a white indication appears just below the key. After obtaining the above indication the RED button below the key must be pressed and the key must be turned clockwise and extracted simultaneously. One/Two/Three controlling keys are provided in each box with individual indication and button below the respective key.

Inter locking has been provided between signals and emergency crank handle control keys in such a way that the points which controls and once the crank handle key is extracted it is not possible to set the route and clear the signal/signals reading over that point/points till such time the key is restored back to its box. For the purpose of facilitation & flexibility and quick reach of the emergency crank handle the crank handle keys have been provided in different groups at different areas in the Yard.

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Zone	Crank Handle controlling key combinations Nos.	Controlled Point Nos.	Location
NORTH	CH 15	123	CH GOOMTY
	CH 16	121, 122, 125	
	CH 17	110, 111, 112, 113	CH GOOMTY
	CH 18	114	
	CH 19	115, 116	
	CH 20	109	
	CH 21	127	
	CH 22	107	CH GOOMTY
	CH 23	105, 106	
	CH 24	103	CH GOOMTY
	CH 25	102	
	CH 26	101	
SOUTH	CH 1	161	CH GOOMTY
	CH 2	160	
	CH 3	158, 159	
	CH 4	147, 148, 150	CH GOOMTY
	CH 9	145, 146, 143	
	CH 11	144	
	CH 12	Spare	
	CH 5	153	CH GOOMTY
	CH 6	151, 152	
	CH 7	149	
	CH 8	138, 139, 140	CH GOOMTY
	CH 10	132, 133	
	CH 13	130	CH GOOMTY
	CH 14	129	

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One crank handle is kept in a pad locked box kept at each of the above places and the keys of this padlock after locking the crank handle shall remain in the personal custody of the Station Master RRI.

The crank Handle along with the concerned controlling key can be handled only by the concerned field SM and the S&T maintenance staff as per the instruction of the Cabin Station Master. It is the personal responsibility of the field SM/Cabin Station Master to ensure that as soon as the required manual operation of the point /points in his zone are completed, the crank handle is restored to the padlocked box and the box properly pad locked and that the crank handle control key is also returned to the respective crank handle interlocking box and transmitted to the Route Relay Cabin expeditiously

It will be seen from the above table that, in all there are nine groupings covering all the power-operated points in Simhachalam North yard. Control keys have special arrangements of configuration for each group and the point machines of the corresponding group have a matching configuration at the key hole permitting the entry of the key meant only for the particular set of points in that group. The detailed procedure of the emergency crank handle operation of points at different zone are given below:

46.0 POINT ON SOUTH AND NORTH ZONE:

The concerned field TP shall exchange private number with the cabin Station Master from the respective zones (South /North) giving his identification. The Private Number shall be recorded in the crank handle register. The cabin Station Master should then order the Panel Station Master to release the concerned crank handle controlling key. The Panel Station Master should release the control by pressing the concerned crank handle button and the crank handle group button [CHRB]. The release of CHNB the control is indicated by flashing WHITE indication on the panel near the crank handle button.

At site on the concerned crank handle-interlocking box, the RED indication appears below the key. The field SM should then press the RED button below that key and extract the key from the box. The extraction of the key is indicated on the Route Relay Panel by flashing RED indication.

The point/points is/are then operated with the help of the emergency crank handle taken out by the field SM from the pad locked box in the goomty/gate lodge after opening the aperture in the point machine with the help of the controlling key by the field SM at site and set to the desired position, clamped and pad locked both facing and trailing and the keys of the pad lock shall be in the personal custody of the field SM after which the field SM shall restore the controlling key to its original place in the crank handle interlocking box (after locking the crank handle in its box) and turned clockwise.

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Restoration of the controlling key back in its place is indicated by turning of the flashing 'RED' indication into steady ' RED' with flashing 'WHITE' indication. The panel operator should then withdraw the released control by pressing the crank handle button and the CHNB. The steady RED indication disappears and steady WHITE indication appears indicating the normal condition. The WHITE indication on the crank handle interlocked box at site also disappears.

When the control has been withdrawn the field SM should advise the Cabin Station Master communicating a Private Number assuring him that the desired point/points has been operated to the required position as ordered by Cabin Station Master, set correctly, clamped and padlocked in their proper position and the control is returned. The private number given by the field SM shall be recorded in the crank handle register.

The Cabin Station Master on duty , after ensuring the correct setting of defective points shall verify from the visual indication available on the panel that all the points on the route are set to the desired position and shall instruct the Panel Station Master to take off the concerned signal for movement of train over the said point/points.

If the correct setting of the defective points in the desired position is not indicated on the panel, the train shall be piloted IN/OUT in terms of Subsidiary rules No.3.69.01, 3.69.02, 3.69.03, 3.70.01 and 3.70.02.

The route once set and locked for receiving or despatch a train shall not be interfered with unless the said movement is completed or cancelled and expressly so directed by the Cabin Station Master.

Whenever the crank handle is required to be used by a signal official for maintenance work or for attending failure, the signal official must give disconnection memo (SI-4) to the Cabin Station Master on duty. After making necessary entries in the crank handle register, the Cabin Station Master shall obtain the acknowledgement of the signal official in the crank handle register and then release the concerned crank handle controlling key to the signal official.

The concerned point/points shall be treated as defective till the emergency crank handle controlling key is restored to its normal place and control is withdrawn by the Panel Station Master.

Before parting/releasing control with the emergence crank handle for maintenance work by signal official, the Cabin Station Master shall ensure that the reception/departure signals for effected line/lines are at "ON" position. The points as the effected line should be treated as non-interlocked and the Cabin Station Master should instruct the concerned field Station Master for setting clamping and padlocking the facing and trailing points over which the train is to passed and such assurance is taken by the Cabin Station Master from the field Station Master supported by Private Number before piloting IN/OUT of trains over the affect points as per GR 3.69, 3.70, 5.09 and SR's thereto.

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An emergency crank handle register is to be maintained in the Route Relay Cabin with the following proforma by on Cabin Station Master of Route Relay Cabin wherein the particulars of usage of the emergency crank handle must recorded.

- i) Date.
- ii) Point No, which failed or required to be tested.
- iii) Time of failure.
- iv) Disconnection Memo No. received from S&T staff.
- v) Points controlling key No. released from Route Relay Cabin.
- vi) Time when release was given.
- vii) Private Number/ signature assuring correct setting, clamping and padlocking of the concerned points.
- viii) Private Number or signature of the official to whom the controlling key is released.
- ix) Date and time fault rectified.
- x) Time when controlling key release withdrawn by Panel Station Master.
- xi) Signature and designation of official who rectified the fault.
- xii) Remarks.

When point become defective the Cabin Station Master must comply with GR 3.51, 3.77, 5.10 and SR's thereto and he must notify all concerned promptly for speedy restoration.

When interlocking fails all the effect points on a route, both facing and trailing points must be clamped and padlocked before allowing any movements over the affected points.

For use of Crank Handle for motor operated point refer to rule No.20.06 of Operating Manual also.

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APPENDIX-'B'**INTERLOCKING BETWEEN SIGNALS AND BLOCK INSTRUMENT:**

This Route Relay interlocking Cabin is equipped with the following types of Block instruments to control movements of trains from and to adjacent Block Section.

<u>Srl No</u>	<u>Section</u>	<u>Type of block instrument</u>
1	SCMN – PDT	SGE type Double line Lock & Block Instrument
2	SCMN-GPT	
3	SCMN-GPT (By-pass double line)	
4	SCMN-'A' Cabin WMY (Uni-Direction)	
5	SCMN-Block Hut On SE dispatch line (Uni-direction)	
6	SCMN-PDT (KK Single Line)	Handle Type Single Line Token-Less Block Instrument.
7	SCMN-Block Hut on KK Single Line	
8	SCMN-PDT [Middle line]	
9	SCMN-JGPM on VSP Line 1 Single Line	
10	SCMN-JGPM on VSP Line 2 Single Line	

47.0 INTERLOCKING BETWEEN SIGNAL AND BLOCK INSTRUMENTS**1) LAST STOP SIGNAL CONTROL:**

- a) The Block working of UP and Down line section SCMN-PDT, SCMN-GPT, SCMN-GPT By pass double line and SCMN-"A" Cabin WMY & SCMN & ELS Block hut are controlled with the provision of double line Lock and Block Instruments (SGE type) and are provided at Route Relay Cabin. The Down Advanced starter signal No. S 4 (towards PDT) and UP Advanced Starter signal No. S63 (towards GPT) and Advanced Starter signal No. S 61 [towards "A" Cabin WMY) are interlocked with the respective Lock and Block Instrument, in such a way that the UP/Down Advanced starter signal can not be taken off unless the line clear is obtained from the block station in advance with the needle of the concerned block instruments is in the "Line Clear" position.
- b) The block working of the following single line sections SCMN-PDT (KK and middle line), SCMN-Block Hut, SCMN-JGPM on VSP Line I, SCMN-JGPM on VSP Line II are controlled with the provision of Token-less Block Instrument (Handle type) and are provided at Route Relay Cabin.

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The Advanced starter signals of the single line sections are interlocked with the respective Token-less block Instrument in such a way that the an Advanced starter signals can not be taken off unless the line clear is obtained from the block station in advance and the handle of the Token-less block instrument is turned to "TGT" position.

The concerned Advanced starter signal aspect will be changed from "OFF" aspect to "ON" aspect as soon as the leading pair of the train wheels occupies the concerned Advanced starter signal replacement track circuit provided a head of the respective signal, for both double line & single line.

2) BLOCK RELEASE

- a) The block instruments are restored to normal (Line Closed condition) only after the complete arrival of the train past the block over lap a head of the respective Home signal on either side of the SCMN yard.
- b) Failure to turn the commutator of DLBI at the receiving station to "Train on Line" position as soon as the train has entered the block section may result in the failure of the block working.
- c) It is possible to restore the last stop signal of station in rear to "ON" position by receiving station by turning the commutator of DLBI "Train on Line" position in case of emergency.
- d) All the power signaling installations in the Simhachalam North yard are centrally controlled from the Route Relay Cabin and it is explicit in this arrangement that the complete arrival of a train into the yard from the block section can not be vouched by the operating personnel in the centrally located Route Relay Cabin and in order to ensure complete arrival of the incoming train. Axle Counters are provided between SCMN-PDT (KK Line), PDT- SCMN (UP Line), SCMN-Block Hut (S.E.Rly. Goods Despatch), SCMN-Block Hut (KK Line), SCMN-VDPD (VSP Line I) and SCMN-VDPD (VSP Line II) of the SCMN Yard. Thus the Axle Counters provided at the end of the Block Overlap ahead of the signal to ensures complete arrival of the incoming trains.
- e) In the event of failure of Axle Counter block working of the section concerned is to be suspended. Line clear Station Master shall not normalise the commutator of the concerned block instrument to " Line Closed" position and shall not Despatch "Train out of block section" report to the station in rear until he is satisfied by seeing the last vehicle indicator on the last vehicle of the incoming train (after arrival) of which Axle Counters failed or obtaining the complete arrival certificate from the Guard of the train, or by a competent Railway servant who was deputed to confirm the same in case of train with out guard.

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- f) After satisfying as above, line clear Station Master should obtain permission of Station Master in rear concerned as the case may be for resetting the Axle Counter. The button of the Axle Counter reset unit should be pressed and released the same after "Permission granted" indication in Yellow appears in the reset unit. At the same time "Permission Received" indication in Yellow appears on the reset unit concerned in Route Relay Cabin/Simhachalam North. Line clear Station Master in Route Relay Cabin should, then unlock and press SMs reset button on the reset unit concerned after which "Permission granted" indication on the reset unit of the station in rear and "Permission received" indication in Route Relay Cabin disappears and Axle Counters will be reset and "Axle Counter Section Clear" indication in Green appears on the reset unit at Route Relay Cabin. Also the counter of the reset unit registers next higher number which should be recorded in Train Signaling Register. Number of the resetting counter of LVCD.(Axle counter) for each re-set should be recorded in a separate counter register by the SM/RR1 in addition to recording in TSR. The line clear Station Master may then normalize the commutator of the block instrument to "Line Closed Position" and Despatch "Train out of block section" report to the station in rear.
- g) In case the Axle Counters are not reset by above operation "Section Occupied" indication in Red will continue to appear on the reset unit concerned in Route Relay Cabin. On duty SE(S)/ Route Relay Cabin should be promptly advised to rectify the Axle Counter failure.
- h) Until the failure of Axle Counter is rectified by signal staff the following procedure should be adopted to check the complete arrival of train and to normalize the commutator of the block instrument concerned. During the failure of Axle Counters line clear Station Master should depute a senior points man with a Private Number book to the Guard of the train for checking and taking the "intact" of complete arrival of trains.
- i) When the failure of Axle counters is rectified by the signal staff. Line Clear Station Master should re-set the Axle Counters in co-operation with the Station Master in rear as explained in the foregoing para. Then the points man in the goomty on being unlocked and advised by Line Clear Station Master should extract the key from RKT2 by pressing the push button and insert in RKT1 and operate the same. Then the study Yellow indication on the right side of LVVYN button on the control panel starts flashing. The Panel Station Master should withdraw the control by pressing LVVYN button concerned and GSRB button. Simultaneously Line Clear Station Master should also press the acknowledge button. Then the flashing indication ceases and steady Yellow indication on the left side appears indicating that the Axle Counter is re-set and normal working is resumed.

NOTE: The same procedure to be adopted for Motor trolleys working in case of Axle Counter failure

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Appendix –'B'**49.0 Reset process of last vehicle check device system.**

Last vehicle check device resetting system is installed in RRI building. Last vehicle check device is provided between SCMN -JGPM on VSP line No.1&2 only.

This system has three indication lamps as red for suggesting the Station Master on duty that the block section is not clear or the system has failed and Green indication for suggesting the station Master on duty that the block section is clear.

In the event of Red indication continues even after the complete arrival of the train, the resetting procedure of LVCD is to be resorted to-Before resetting of the system, the Station Master on duty shall verify the completeness of the train by verifying last vehicle indication for run through trains or by sending train complete arrival register to the Guard of the train and ascertaining certification from the Guard in the train complete arrival register for stopping trains. Guard shall not sign the register unless he verifies the last vehicle indicator of his train and train is standing clear of the fouling mark,

TPM/TP whoever goes for ascertaining complete arrival, shall also verify the last vehicle indicator and that the train is standing clear of fouling mark shall repeat to the station Master on duty the complete arrival of the train supported by Private number through goomty phone or shall deposit back the complete arrival register to the station Master on duty whichever is earlier.

After ascertaining complete arrival of the train as above, the resetting process shall be resorted to

For resetting of the system, Station Master on duty shall advise the Station Master on duty at JGPM the complete arrival of the train supported by Private number and also advise to co-ordinate resetting as follows.

- i) At both the stations concerned i.e. SCMN & JGPM will insert SM's reset key, press and turn.
- ii) Thereby 'preparatory'(PREP) reset indication appears at both the stations on reset box.

After completion of both the operations as above, the first train on the effected section shall be piloted at either of the stations. Subsequent to piloting, the system shall resume.

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Appendix –‘B’**50.0 TELECOMMUNICATIONS:**

The following telecommunication facilities provided at the RRI cabin to deal with the train movement.

- i) The Block telephone attached block instruments of double line SGE lock & block instrument and Diodo. Single line token less block instruments connecting adjacent block cabin/stations.
- ii) Magneto phone connecting the block cabins /stations.
- iii) Section control phone of the section VSKP – DVD – KTV VSKP complex board.
- iv) Section Control phone of section OEC-KRPU for the single line section.
- v) Magneto phone connecting level crossing gates connected to RRI cabin viz 870/9-10, 870/13-14 & 864/17 individually.
- vi) Traction power control of section VSKP-PSA. Section including VSKP complex board stations.
- vii) Traction power control of section OEC- KORPUT section.
- viii) Section Control phone of SCRLY section VSKP-RJY
- ix) Auto telephone connecting Divisional HQ & stations between VSKP – DVD – PSA including yard cabins.
- x) VHF set connecting adjacent block cabins / stations.
- xi) Announcement speaker to talk to yard staff.
- xii) BSNL auto telephone for SM to contact Divisional Officer in case of urgency & vice versa.
- xiii) Magneto phone to GC/ANCC siding a clerk in-charge of SCM staff.
- xiv) Auto phone to crew SCR running room.
- xv) Desk type electronic magneto phone to TNC.

50.1.0 MEANS OF COMMUNICATIONS AT ROUTE RELAY CABIN:

- 50.1.1** Telephone attached to SGE type Lock and Block Instrument connected to Pendurti Station.

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- 50.1.2 Telephone attached to Daido Single Line Token-less Block Instrument connected to Pendurti Station.
- 50.1.3 Magneto Telephone provided between RRI Cabin and ANCC siding Goomty.
- 50.1.4 a) Magneto Telephone provided between RRI Cabin and mid section Interlocked "A" Class Interlocked Level crossing gate between SCMN-PDT at KM 864/17.
- 50.1.5 RRI Cabin is connected to DVD-VSKP-KTV Complex Control Phone.
- 50.1.6 RRI Cabin is connected to OEC-Korapui Control Phone.
- 50.1.7 RRI Cabin is connected to main Line Traction Power Control Phone [includes complex Zone].
- 50.2.0 Telephone attached to SGE type Lock and Block Instrument connected to RRI Cabin Gopalpatnam.
- 50.2.1 Telephone attached to SGE type Lock and Block Instrument connected to "A" Cabin Waltair Marshalling Yard (RYD) uni-directional.
- 50.2.2 Telephone attached to SGE type Lock and Block Instrument connected to ELS Block Hut of WMY (SE Dispatch line).
- 50.2.3 Telephone attached to Daido single line Token-less Block Instrument connected to Jaggayyapalem RRI Cabin on line No 1 & Line No 2.
- 50.2.4 Telephone attached to Daido single line Token-less Block Instrument connected to ELS Block Hut.
- 50.2.5 Magneto Telephone provided between RRI Cabin and Gopalapatnam.
- 50.2.6 Magneto Telephone provided between RRI Cabin and "B" Class Interlocked Level crossing gate KM 870/13-14 and 870/9-10.
- 50.2.7 Magneto Telephone provided between RRI Cabin and Jaggayyapalem SSI cabin.
- 50.2.8 Magneto Telephone provided between RRI Cabin and Station Master "B" Cabin of WMY for working trains in case of Lock and Block failure.
- 50.2.9 Automatic four digit Auto Phone is provided.
- 50.3.0 Magneto Telephone provided between RRI Cabin and Goods Clerk ANCC and Head Ticket Collector Simhachalm Station.

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Appendix-'B'**50.4.0 ACTION TO BE TAKEN IN CASE OF FAILURE OF COMMUNICATION****50.4.1 FAILURE/SUSPENSION OF BLOCK INSTRUMENTS:**

In the event of suspension/failure of Block Instruments trains shall be worked under any one of the following means under the priority indicated hereunder. An endorsement shall be made as "Block instrument suspended at _____ for _____ (cause) in that particular portion on both the portions as in the case of Single line and both side suspension on double line in the Train Signal Register and draw a permanent Red line below the entry. During the period of suspension/failure the Station Master on duty at RRI Cabin will do line clear work with Station Master's at the other end of section and make all the entries for section so suspended/failed in the Train Signal Register, till Block Instrument is resumed.

When the Block Instrument is restored "Block Instrument resumed atin concerned portion of the Train Signal Register and also draw a Red line below the entry and there after he will maintain the Train Signal Register as usual.

NOTE: Whenever the SGE Type double line Block Instruments are suspended for section SCMN and Pendurti, SCMN and "A" Cabin of WMY. Station Master at RRI cabin shall do line clear working with Station Master Pendurti and "B" Cabin of WMY.

50.4.2 In the event of failure/suspension of double line SGE Type Lock and Block instrument or Single Line Daido Type Token-less Block Instrument line clear shall be obtained from Station Master on duty from adjacent Block Stations as detailed below vide SR.6.02.06.

50.4.3 TOTAL INTERRUPTION OF COMMUNICATIONS:

a) Double Line Section.

In the event of total interruption of communications on the double line section trains will be worked in accordance with the provision of SR 6.02.04

b) Single Line Section:

In the event of total interruption of communications on the single line section trains will be worked in accordance with the provision of SR 6.02.05.

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Special Note

When there is partial interruption i.e.. failure of one of the means of communications necessitating working train messages with identification numbers towards [Pendurti] message shall be prepared with the word Third Line (KK Line) to all train numbers to distinguish between double line trains and single line KK line trains.

50.4.4 FAILURE OF COMMUNICATION BETWEEN STATION MASTER RRI CABIN AND LEVEL CROSSINGS.

Working of trains in the event of failure of communications between Simhachalam North RRI and Level Crossing Gate is detailed in Appendix-A.

PAGING AND TALK BACK YARD COMMUNICATION AT SIMHACHALAM NORTH:

For facilitating communication between yard and RRI Cabin 16 Nos. of Paging and Talk back points have been provided in the SCMN Yard out of which 5 Nos. are located in the North (HWH) end and 11 Nos. on South (VSKP) end respectively.

To establish communication from yard to RRI Cabin, the field SM/YM shall press the 'Call' switch located in the yard equipment fixed on a post, which gives indication on the 'Control Console' panel located in RRI Cabin. On getting the indication the SM at RRI Cabin operates the relevant Key and communication is established.

To establish communication from RRI Cabin to field, the SM at RRI Cabin operates the relevant group Key i.e.. South end or North end and gives announcement through his microphone, which is heard through loud speakers located at different points in the zone.

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APPENDIX 'C' TO STATION WORKING RULES OF SIMHACHALAM

1.0 Rules for Working of Anti-collision Device (Raksha Kavach)

No Anti-collision Device provided at the Station.

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APPENDIX-'D' TO STATION WORKING RULES OF SIMHACHALAM NORTH STATION

The following staff are concerned with the movement of the trains whose duties are given below:

CHIEF STATION MANAGER (SUPERVISORY)

He is In-charge of Simhachalam North. As an in-charge of the station, he shall go through the Station Working Rules and Working Rule Diagram and get himself conversant with the detailed working of station and Panel, Points and signals etc.. He is also responsible to explain to the staff, the Station Working Rules along with connected rules of G&SR and other manuals as well as circulars/instructions issued from time to time and obtain their assurances. He is responsible to observe Chapter II and V of G & SR and other relevant rules of Chapter XX of Operating Manual. He shall also responsible to see that

- a) Staff while on duty wear proper uniform.
- b) The staff are civil and helpful to all rail users and passengers
- c) All staff shall follow the rosters issued by DPO|WAT from time to time.
- d) He shall conduct inspection at station, cabin and bring out lapses of staff if any to the notice of higher authorities
- e) All transportation records are checked daily and ensure proper utilisation of wagons placed in sidings and to ensure improvement in mobilising of rolling stock if any.
- f) All safety records are maintained properly and identify the lapses if any and take an appropriate action as a correcting measure,
- g) All rules prescribed in G.SR, Block working manual and other relevant directions issued from time to time by competent authorities are followed rigidly by all concern and any irregularities noticed are reported promptly to the authorities concerned
- h) All accidents are promptly reported, attended to and a comprehensive report along with details i.e sketches, statements of staff involved and fixing responsibility is sent to SR.DSO/SR.DOM within 48 hours of occurrence.
- i) Station premises are kept clean and tidy
- j) All equipment apparatus and instruments including signal and interlocking gears and fittings are kept clean and failures are promptly reported to staff concern for repairs, notice and action
- k) The BWM 2.09(e) is complied with daily. He is completely responsible for the total function of system at station and ensure smooth flow of traffic with least possible detention.

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APPENDIX-'D'**2.0 STATION SUPERINTENDENT (PANEL)**

He is responsible for operation of Panel Board for reception/dispatch of trains and for shunting operations etc. He is also responsible to authorize the respective end Dy.SS for granting line clear to trains. He shall maintain Train Signal Register properly. He shall speak to SCR on duty and plan the passing of trains and report arrival and departure reports. He shall be responsible for protection of a running line when one is blocked by any means. He shall also be responsible for transmitting crank handles and maintenance of corresponding registers including signal failure register properly.

In general he is responsible to ensure safe passage of trains without undue detention. In the event of failure of points/signals he shall depute concerned Dy. SS/SM for physical ensuring of correct setting, clamping and pad locking of points before train is piloted. He shall be responsible to ensure that all the staff discharge their duties properly and shall report all irregularities and unusual incidents to Station Manager and all concerned promptly. He shall be responsible for train ordering, calling running staff, arranging relief and interposing powers etc.

3.0 SS/SM [LINE CLEAR]

For Line Clear operations two Dy.SSs in each shift are posted at either side of Panel Board for working line clear duties at their respective ends in consultation with SS (RRI) supported by Private Number. He shall maintain Log Book on OPT-28B. He shall ensure closure of L/C Gates when required for taking of signals or for granting line clear or for shunting operations as the case may be. He shall exchange signals with train crew and Guard and ensure complete arrivals before closing of Block section. He shall also watch the Panel Board operated by SS whether functioning properly.

The SS/SM [Line Clear] posted at RRI Cabin Simhachalam North is responsible for the following and work under the supervision and orders of the RRI board Station Superintendent.

- a) Obtaining and granting Line Clear in accordance with General & Subsidiary Rules, Block working Manual and Station Working Rules of the Simhachalam North Station.
- b) He should operate lock and block/DAIDO type Tokenless Block Instrument as the case may be installed in the Route Relay Cabin.
- c) He should maintain all train passing and safe working records such as Station Master's diary, Train Signaling Register, Block Ticket, Pilot Memo, Starting Order, Paper Line Clear Tickets etc.
- d) He should report defects or deficiencies if any in block instruments to the concerned Signal & Telecommunications Staff for speedy repairs.
- e) He is responsible for safe custody of the keys block instruments and shall not permit unauthorised persons to enter into the cabin or operate or interfere with lock and block tokenless block instruments.

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4.0 CABIN MASTER (Line Clear)

He is responsible for the safe reception of trains, operation of lock and block instruments provided in cabin such duties he will perform in communication with or under orders of the station Supdt on duty. He will operate the block instruments as well as ensuring closing of LC gates if any during his duty hours.

He shall not leave the cabin while on duty until relieved by a competent person and without the knowledge and permission of SS on duty vide SR 3.51.01. He shall carry out any other work entrusted to him by the SS on duty. He will watch the run through trains specially and report irregularity immediately to the SS on duty vide SR 4.42.02.

5.0 POINTS MAN/TOKEN PORTER:

- a) They shall work according to the orders given by the Station Superintendent/Station Master in Route Relay Interlocking Cabin and Station Master at site.
- b) They are responsible for coupling and uncoupling of wagons, setting points [where necessary] detaching and attaching vehicles and controlling the vehicles and relaying hand signals given by the Shunting master/Jamadar.
- c) During shunting operations they are also responsible for securing loose vehicles in the siding and on running lines.
- d) They will work as Engine Pilot man as and when required and piloting 'IN' and 'OUT' of trains in case of signal failures.
- e) Whenever necessary they will work in the goomties under the orders of Cabin Station Superintendent/Dy. Station Superintendent for observing and reporting on telephone above the complete/incomplete arrival/departure of trains.
- f) In case of incomplete passage of train he shall promptly report to the Panel Station Superintendent/Line Clear Dy. Station Superintendent.
- g) While working in goomty as required under item [e] above, they should observe the condition of the train and promptly inform panel station superintendent / Dy.SS line clear in case of any abnormal / unsafe condition on the train.

6.0 SAFAIWALA

He shall attend to the sanitation of the Railway Premises including SS's Office, RRI Cabin, Platforms, Staff Quarters, Latrines and cleaning of drainages etc He shall clean and fill with oil in the hand signal lamps and other lights. He shall carry out any other work entrusted to him by the Station Master on duty.

- 7.0** All staff on duty are to neatly uniformed and should be in possession of their hand signals. They shall not leave their work spot unless they are relieved by a reliever.

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APPENDIX 'E' TO STATION WORKING RULES OF SIMHACHALAM NORTH STATION**ESSENTIAL EQUIPMENT**

A list of essential equipment's is given below which shall be maintained in good Working order.

<u>Sl.No</u>	<u>Description</u>	<u>Station</u>
1	Detonators	20
2	Hand Signal lamps	5(2 Spare)
3	Hand Signal Flags	5(2 Spare)
4	Clamps with Padlocks	40
5	Safety chains with Pad locks	18
6	Fire & Sand buckets	5
7	Minimax Fire Extinguishers (all type)	4
8	First Aid Box	1
9	Stretcher	1
10	Blanket	1
11	Red Magnetic Collars	25
12	Power Block Collars	25

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APPENDIX 'F' TO STATION WORKING RULES OF SIMHACHALAM NORTH

Rules for working of DK Station, Halts, IBH, IBS and out lying sidings.

1.1 Working of DK station , IBS , IBH & Out Lying Siding

Nil

1.2 Working of Halts (Flag Station)

- i) Simhachalam passenger halt is situated between Gopalpatnam RRI cabin and Simhachalam North Station at KM....
- ii) A Number of passenger and express train are given with stoppage at the station for entraining and detain passengers.
- iii) The working guard & loco pilot of the trains (provided with stoppage at the station as per working time table) are responsible to stop and start the train as per schedule halt time ensuring safe entraining & detraining of passengers.

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APPENDIX – 'G' TO STATION WORKING RULES OF SIMHACHALAM NORTH

Details of the working train on 25 KVAC traction of SCMN Station.

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APPENDIX – 'H' TO STATION WORKING RULES OF SIMHACHALAM NORTH**WORKING INSTRUCTIONS OF SIDING:****1.0 WORKING INSTRUCTIONS OF M/S ANDHRA CEMENT CO.. LTD. SIDING.**

- 1.1** The siding takes off from the UP running line at KM 868/8-9 between UP Home and UP routing Home Signals of Simhachalam North towards Howrah end to serve the M/S Andhra Cement Company Limited.

The Signal diagram No. SI- 23090 Alt-'A' shows the takeoff points to private siding.

WORKING OF THE ANCC SIDING:

On receiving the order number from SCR/WAT regarding placement of any load/rake in ANCC siding, SS/SM on duty at SCMN RRI cabin shall depute one of the TPM's to the goomty for operation of siding point. TPM who is deputed, shall proceed to the goomty, extract the key from RKT when it is transmitted from RRI as per the procedure given in Para No.1.2, unlock the unit as required, set the point, clamp and padlock. The same compliance of instructions from SS shall be fulfilled by the TPM and confirmed by a private number.

SS/SM on duty at RRI cabin, on receiving the confirmation supported by private number to the effect of setting, clamping and padlocking of the siding take off point, shall handover an authority on from No.T-806 (shunting authority) to the loco pilot of the train through the guard of the train. SS/SM on duty shall advise the TPM at the goomty to show proceed hand signal.

After safe passage of the pilot past the take of point, TPM on duty shall normalize the point, transmit back the key to panel through RKT.

While returning also pilot shall stop at the STOP BOARD in rear of the take off point and shall obey the aspect of shunt signal No.19 as and when it is taken off or otherwise the specific instructions received from the SS/SM on duty at RRI Cabin.

As and when rake is placed in ANCC siding, the loco pilot of pilot shall surrender the siding badge to the ANCC authority whichever may have been given to him as an authority to enter into the siding. While in return, the loco pilot of pilot shall collect the badge from the ANCC authorities which may be surrendered to the SS/SM on duty at RRI cabin in return.

1.2

The Guard of the pilot, immediately after placement of the rake in the siding, shall make necessary entries of the timings of placement etc., in the register maintained for the purpose by the siding holder. Similarly entries of clearance of the rake shall be recorded in the register while clearing from the siding.

Lever Number	Description
Lever No. 1	Siding control key of RRI Cabin of SCMN.
Lever No. 2	Lock bar on crossover No.3 at South end.
Lever No. 3	Crossover point connecting UP Main Line to ANCC siding.
Lever No. 4	Lock bar on crossover No.3 at North end.

The levers can be released by insertion and unlocking with a Key 'P' released from RKT at Goomty when push button No- 104 on RRI Board is pressed.

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When button No.104 in its "Reverse" position on the operating panel at Simhachalam North RRI Cabin all reception signals of UP Line SCMN towards HWH end of the yard will be locked in "Normal" position.

The return pilot will stop short of the stop board near ground lever frame goomty. The guard working the pilot will inform the AYM, about the readiness of the pilot. The AYM will inform the SS on duty RRI who in turn arrange the reception of the pilot in consultation with SCR on duty and nominate a clear line on to which the pilot is intended to be received.

The field AYM after complying with the instructions given by the SS/ on duty RRI Cabin, set and lock the route nominated line, release the key to the ANCC ground lever frame goomty for the pilot admission on getting confirmation of setting the siding point from the points Man, SS/RRI Cabin shall take off Shunt Signal admission into yard. The transaction between SS/ RRI Cabin and AYM shall be supported by Private Number.

After the safe passage of pilot over the crossover No.3 at goomty and entering into the UP line/nominated line the points will be normalized by the TPM and the Control key from the goomty will be transmitted back to the RR! Cabin through RKT.

Normally pilot movement should not be permitted when an UP train is on line clear or in the section. Such movement if necessary can only be permitted after the SS/ RRI Cabin on duty satisfying himself that the said UP train has come to stop at the first stop signal.

No shunting to be permitted inside the factory by the pilot engine except dropping of the inward loads and clearing of the outward loads in one hook. Not more than one pilot shall be allowed to work into the factory at a time.

SIDING Will BE WORKED DURING DAY AND NIGHT ALSO:

The speed of the pilot should not exceed 8 KMPH
The factory authorities should ensure the following:

Outward loads should be kept ready for clearance properly grouped and coupled.

Clearance of any jam on the siding lines to be ensured always.

Wagon doors are properly closed and secured after unloading/loading

All couplings should be properly tightened.

No loose vehicle should be kept in line Nos. 1, 2 and 3.

Inward load should be properly secured by pinning down the hand brakes and applying the necessary sprags and safety chains both ends to avoid rolling down of vehicles.

Factory engine while working should not be permitted to cross the stop board provided at the entrance of the Factory area.

Such movement can only be permitted, during abnormal circumstances like pilot engine failure or when the assistance of factory is sought due to any reasons. In such cases of moment the factory engine should be in possession of a clear written authority issued by a Station Master on duty.

Unloading and loading should only be done within the fouling marks. No unloading and loading is permitted beyond the points towards VSKP end.

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